

The Mining Journal

RAILWAY AND COMMERCIAL GAZETTE.

FORMING A COMPLETE RECORD OF THE PROCEEDINGS OF ALL PUBLIC COMPANIES.

No. 836.—VOL. XXI.]

London, Saturday, August 30, 1851.

[PRICE 6D.

FOR POSITIVE SALE—TWO STEAM-ENGINES, THREE BOILERS, and the whole of the COLLIER STOCK, a WEIGHING MACHINE, TWO fine powerful DRAUGHT HORSES, Richmond's Patent STEAMING APPARATUS, Carts, Gears, Implements, &c.

MR. W. PEARSON has received instructions from Mr. Hooton, who has succeeded to the Farm and Works lately carried on by Thomas Stopford, Esq., and known as SHEVINGTON MOOR COLLIERY, to SELL, BY AUCTION, on Monday, the 8th September, 1851, punctually at Eleven o'clock in the forenoon, at the above-named premises, which are situate about 4½ miles from WIGAN, in the county of LANCASTER, in consequence of the mines being worked out, and the present owner having no further connection with the coal trade, the whole of the

COLLIERY PLANT, &c.

Including a most excellent working eight-horse condensing BEAM ENGINE, with a capital fourteen-horse power, equal to new, and furnace work, winding shaft and verticals, spur wheels, a single pumping crank shaft, slide rods and L leg, and the ashlar stone pillars, &c., one well-manufactured twelve-horse cylindrical boiler, in good order, a four-horse horizontal high-pressure engine, with fly-wheel and shaft, two spur wheels, a six-horse boiler, with the furnace work; also a machine, which has been worked by the said engine to grind coal for the purpose of making coke, and the stonework, &c.

The steam-engines, boilers, weighing machine, coal grinding apparatus, &c., were manufactured by the Haigh Foundry Company. They are in good working order, and will be submitted for positive and unreserved sale, presenting an opportunity seldom to be had by parties requiring such property.

Catalogues will be ready on Wednesday, Sept. 3d, and may be had from Mr. Hooton, at the place of sale, or at the auctioneer's office, Standishgate, Wigan.

PURSUANT to a DECREE of the HIGH COURT of CHANCERY, made in a cause of BIRCH v. PRICE, with the approbation of Sir William Horne, one of the Masters of this said court, peremptorily, by Mr. JOHNSON, on Friday, the 24th day of October next, at Three o'clock in the afternoon, at the Wynnstay Arms Hotel, in WREXHAM, in the county of DENBIGH, in one lot, the FREEHOLD ESTATE, consisting of PLAS MOSTYN FARM, COLLIERIES, and MINERS OF COAL and IRONSTONE, situate in the said parish of Wrexham.

Particulars may be had gratis, in London, at the said Master's Chambers, Southampton-buildings, Chancery-lane; Mr. N. C. Milne, solicitor, Harcourt-buildings, Temple; Messrs. Hughes, Fairhurst, and Webb, solicitors, Clement's Inn; and in the country, of Mr. Jones, solicitor, Brynhyfryd, Ruthin; and Mr. Robert Humphreys Jones, solicitor, Wrexham; at the place of sale; and the principal inn in Ruabon, Liverpool, Manchester, Chester, Shrewsbury, Wolverhampton, and Birmingham.

VIADUCT FOUNDRY, NEWTON, NEAR WARRINGTON,

TO BE SOLD BY PRIVATE CONTRACT.—TO RAILWAY COMPANIES, ENGINEERS, MACHINE MAKERS, COTTON SPINNERS, AND MANUFACTURERS.—

In consequence of the dissolution of partnership of Messrs. Jones and Potts, engineers and ironfounders, of the above foundry, the WHOLE of that large and well-known ESTABLISHMENT will BE DISPOSED OF, either in one lot, or the Building, Gas-Works, and Cottages will be sold separately. These buildings, with very little alteration,

can be made available for many branches of manufacture. The above works are situated on the Liverpool and Manchester Railway, near the Warrington Junction Station. They are 134 miles from Liverpool, 164 from Manchester, 5 from Warrington, and 4 from St. Helen's.

The Sankey Canal also runs within a quarter of a mile of the works. The buildings, gas-works, and cottages occupy five acres two rods, fourteen poles, statute

measure, which is subject to a chief rent £91 5s. 3d. per annum, with three leases of 999 years each, bearing dates March 25th, 1839, January 25th, 1847, and December 26th, 1849.

There are 77 cottages, the annual rental of which is £530. There are two communications from the London and North-Western Railway into the centre of the works, with a siding along the main line of about 300 yards.—N.B. The machinery, which may be purchased with the land and buildings, or it will be sold in separate items to suit purchasers, consists of 38 lathes, two double wheel, 35 planing machines, 14 drilling machines, eight slotting machines, three screwing machines, and four punching and cutting presses. One 30-cwt. steam hammer, Nasmyth's patent, one riveting machine, which cuts and makes its own rivets, and will rivet a boiler 30 feet long, one large plate bending machine, with rolls 6 feet 6 inches long, and 12 inches diameter, one hydraulic press, an various other machinery, tools, shafting and gearing for working the above machinery, the whole of which are in first-rate working condition, one 30-horse high-pressure engine, and one 14-horse condensing engine, with boilers complete, one new locomotive engine, with 15½-inch cylinder, 20-inch stroke, driving wheels 6 feet 6 inches diameter, one new six-horse horizontal engine, with boiler complete. The smiths' shops contain 40 hearths, with anvils and cranes, and every convenience for both light and heavy work. The fitting, turning, and erecting shops, are capable of holding upwards of 700 hands.

The whole may be seen, and further information obtained on application at the office of the above works, between the hours of nine in the morning and five in the afternoon.

Plans of the works and cottages may be seen, and catalogues of the machinery (which is now being offered by private sale in large or small lots, as parties may require) had at the offices of the following newspapers:—The Midland County Office, Birmingham; Mining Journal in London; Leed's Mercury; and at the offices of Mr. Kirk, auctioneer and valuer, 24, Princess-street, Manchester, who is appointed agent for Messrs. Jones and Potts, the owners.

WALL'S-END COLLIERY.—TO BE LET,

and entered upon or after the 28th day of September next, for such a term of years as may be agreed upon, all that CURRENT-GOING COLLIERY, well-known by the name of WALL'S-END COLLIERY, at present held by Messrs. Archibald and partners, under lease from the Dean and Chapter of Durham, comprising the COAL MINES under the whole of the lands belonging to the said Dean and Chapter, in the township of WALL'S-END, in the county of NORTHUMBERLAND.

The Low Main Seam, which has been sunk to a depth of 22 fathoms below the Benson Seam, and the Beaumont Seam, which has been bored to a further depth of 23 fathoms, remain untouched throughout the Royalty. The Low Main Seam, in the royalty next adjoining, is of good quality, and is worked for gas purposes.

The Benson Seam supplies the vend of the existing colliery. The colliery is con-

tinuous to, and has shipping berths on, the River Tyne.

Plans of the workings of the colliery, and further particulars, may be known on application to Mr. E. F. Boyd, Urpeth Colliery, near Chester-le-street; or at the offices of the Registrar of the Dean and Chapter of Durham, 28, South Bailey, Durham.

Durham, July 2, 1851.

DEVONSHIRE—NEWTON ABBOTT CLAY PITS.

TO BE LET, for a term of Ten, Fifteen, or Twenty-one years, at the option of the taker, with early possession, all those FIELDS, or CLOSES of LAND, situate at NEWTON ABBOTT, in the county of DEVON, known as the CLAY GROUNDS, containing 33½ acres, or thereabout, and belonging to the trustees of the estates of the Earl of Devon.

These fields abound with pipe, potters', and other clay; they are most conveniently situated, near the River Teign and the South Devon Railway Station, of which the taker can advantageously avail himself.

The lands may be viewed, and the depth of the clay tried, on application to Mr. Abberley, surveyor, Newton Abbott; and a plan thereof seen, by applying to Mr. John Drew, land agent, Powderham, near Exeter; Messrs. Lake, solicitors, New-square, Lincoln's Inn, London; or to Mr. Charles Bruton, solicitor and proctor, Northernhay, Exeter, at whose office the terms and conditions of letting may also be obtained.

Sealed tenders to be sent to Mr. Bruton on or before the 29th September next, but the grantors do not bind themselves to accept the highest or any tender.

Newton, August 19, 1851.

TO IRONMASTERS, RAILWAY DIRECTORS, ENGINEERS, and FOUNDERS.—

The SUBSCRIBER having been appointed SOLE AGENT in LONDON for the SALE of Mr. MORRIES STIRLING'S PATENT IRON, begs to intimate that he is prepared to SUPPLY RAILWAY Companies, Engineers, and Founders, with the PATENT MALLEABLE and TOUGHENED CAST-IRON, and that all orders addressed to him for these, and also for RAJLS, with Hardened Surfaces, shall have his prompt attention.

Specimens of the different Irons shown, and every information afforded, on application, information as to the terms of License under Mr. Stirling's Patents will be given by the Subscribers, and also by Mr. JEE, C.E., 6, John-street, Adelphi. A. MACNAUGHT

OFFICES, 22, Queen-street-place, Upper Thames-street.

WAREHOUSES.—Paul's Wharf, 23, Upper Thames-street.

August 2, 1851.

[Duty Free.

TO BRASSFOUNDERS AND OTHERS.—

Notice is hereby given, that the SOUTHAMPTON LOCAL BOARD OF HEALTH are ready to

RECEIVE TENDERS for the SUPPLY of SLUICE and FIRE COCKS, in accordance with the drawings and specification; the former of which may be inspected, and the latter obtained upon payment of 5s. at the office of the Clerk to the Local Board of Health of Southampton, on and after the 24th day of July instant.

Sealed tenders, endorsed "For Hydrants," and addressed "Clerk to the Local Board of Health, Southampton," must be sent in on or before the 5th day of September next.

By order of the Special Works Committee, CHARLES E. DEACON, Clerk.

SOUTHAMPTON, July 17, 1851.

TO AGRICULTURISTS.—IMPROVEMENTS IN THE

PREPARATION OF MANURES.—AGRICULTURISTS are INVITED to take

SAMPLES of MANURES (Stone's Patent Humate), free of expense, at the office of

the GENERAL PEAT WORKING AND MANURE COMPANY, 6, JOHN-STREET,

ADELPHI, LONDON.—The Patent Humate is free from filthy matter; it consists en-

tirely of concentrated decomposed vegetable organic substances, soluble humic acid, fixed

salts of ammonia, with other ingredients, according with soil, plant, and climate. It

will promote vegetation in all its requirements, and invariably improve the soil, and can

challenge the best guano, at one-third the cost.

To every scientific person, or practical farmer (however deficient in knowledge of

chemical science), who inquires into the composition of these manures, the folly of bring-

ing guano to England, even though they cost but one quarter the price now paid for them, will appear most undeniably.

Samples may be had on application at the Mining Journal office, 26, Fleet-street.

MR. JAMES CROFTS, of 4, KING-STREET, CHEAPSIDE, MINING BROKER, renews his OFFERS of SERVICE to CAPITALISTS seeking the means of SECURE INVESTMENTS, which can be made to yield an annual income of 15 to 20 per cent.

MR. CROFTS has a POWERFUL STEAMING APPARATUS, Carts, Gears, Implements, &c.

MR. W. PEARSON has received instructions from Mr. Hooton,

who has succeeded to the Farm and Works lately carried on by Thomas Stopford,

Esq., and known as SHEVINGTON MOOR COLLIERY, to SELL, BY AUCTION,

on Monday, the 8th September, 1851, punctually at Eleven o'clock in the forenoon, at the above-named premises, which are situate about 4½ miles from WIGAN, in the county of LANCASTER, in consequence of the mines being worked out, and the present owner

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capital fourteen-horse power, equal to new, and furnace work, winding shaft and verticals, spur wheels, a single pumping crank shaft, slide rods and L leg, and the ashlar

stone pillars, &c., one well-manufactured twelve-horse cylindrical boiler, in good order,

a four-horse horizontal high-pressure engine, with fly-wheel and shaft, two spur wheels,

and a six-horse boiler, with the furnace work; also a machine, which has been worked

by the said engine to grind coal for the purpose of making coke, and the stonework, &c.

Mr. CROFTS will be happy to give the best advice his experience enables him for the guidance of his friends, and transacts business only for principals.

No. 4, King-street, Cheapside, August 30, 1851.

GENERAL MINING OFFICES.

23, Threadneedle-street, London.

MR. JOSEPH JAMES REYNOLDS, late of CAMBORNE, CORNWALL, begs to inform his friends and the public that he has COMMENCED BUSINESS as a MINING and GENERAL AGENT at the above office, and trusts, by paying a due price to the welfare of his clients, that he will at all times merit their confidence. Having been connected with the management of mines in the most productive districts of Cornwall upwards of twenty years, and being in communication with some of the most respectable agents in the mining districts, Mr. Reynolds will be ready at all times to furnish such information as may be required.

J. J. REYNOLDS will carry on business upon COMMISSION ONLY, making no intermediate price between buyers and sellers, and will be ready at all times to introduce the buyer and seller of any shares to each other.—Office hours Ten to Four.

MESSRS. FRANCIS & CO., in order to avoid the complicated

and indefinite system of CALLS for working or proving mines, consider that a better and more satisfactory one will be found in offering the public those chiefly in which the machinery and underground work required to bring them into a state of profit has been completed and paid for.

In mines thus far advanced, it will be obvious that as there will be no risk, so there can be no necessity for calls—the speculative part of the adventure having been gone through; and in this way capitalists will be enabled to invest with the certainty of immediate return.

Mr. MATTHEW FRANCIS takes leave to announce, that he has several THOUSANDS of POUNDS WORTH of SHARES to DISPOSE OF, which, at the selling price, give a profit of from £20 to £40 per cent.

* * * Offices, No. 7, John-street, Adelphi, London.

MR. JOHN PHILLIPS, MINERAL SURVEYOR AND MINE MANAGER, MARGARET-STREET, NORTH ADELAIDE, in the province of SOUTH AUSTRALIA, after three years' residence and two years' exploration in the colony, RESERVES his EXPERIENCE for BRITISH CAPITAL; awaiting the result of this advertisement in a suitable remuneration for past time and future services.

MR. RICHARD GREENWOOD begs leave most respectfully to acquaint his Friends and the Public generally that he has COMMENCED the BUSINESS of an AUCTIONEER, APPRAISER, MINE SHAREBROKER, and general COMMISSION AGENT.—Mr. R. GREENWOOD having for many years been engaged in the Mining and Commercial business of this county, and being fully aware of the desirability of strict confidence in those who arrange such transactions, does not hesitate to pledge himself to the conducting of whatever business may be committed to his care, with the strictest attention to the interests of his clients.

Parties entrusting property to Mr. Greenwood can be accommodated with an advance of money in anticipation of a sale

OFFICES—PYDAR-STREET, TRURO.

Dated August 15, 1851.

MINING OFFICES, REDRUTH.—JOHN ROBERT PIKE, GENERAL SHAREBROKER (on Commission only), being resident in the centre of the Mining district, POSSESSES great FACILITIES in the DISPOSAL OF or PURCHASING SHARES, INSPECTING MINES, &c., on the most moderate and honourable terms.

MINING SHARES.—MR. HENRY VATCHER, EXETER, OFFERS his ADVICE and ASSISTANCE to PARTIES willing to INVEST in the ABOVE SECURITIES. Ten years' residence in Exeter, together with periodical visits to nearly all the Mines in Devon and Cornwall, enables him to become thoroughly acquainted with their respective merits.—Mr. VATCHER has at his command, at all times, practical and experienced agents, so that if any inspection is required, the same can be done without delay.

MINING AND RAILWAY OFFICES, NO. 3, CASTLE-TERRACE, EXETER.—MR. JOHN JURY, RAILWAY and MINING SHAREBROKER, OFFERS his SERVICES to CAPITALISTS in the PURCHASE or SALE of ANY DESCRIPTION of PROPERTY; and will be happy to point out a selection of such stock as appear the most eligible, from data that can only be arrived at by those who give an undivided attention to the subject.—Every information afforded (either in person or by letter) to capitalists wishing to invest or exchange their securities, and sales or purchases effected upon the best terms, and at one-half the commission usually charged.

MR. JOHN DAVIES, MINING SHAREBROKER, NO. 38, TOWER-BUILDINGS, TOWER-GARDEN, LIVERPOOL.

MR. ALFRED SENIOR MERRY, DEALER in COBALT and NICKEL ORES, and ASSAYER in GENERAL.—Address: LEE-CRESCENT, BIRMINGHAM.

MR. THOMAS JORDAN, METAL BROKER, NO. 75, OLD BROAD-STREET, CITY, exclusive AGENT for one of the BEST MAKERS of HAMMERED IRON, for MARINE, LOCOMOTIVE, and other ENGINES. ALSO AGENT for the SALE of SOUTH STAFFORDSHIRE and WELSH BAR, BOLT and BOILER PLATE IRON, in all its varieties.

The Proprietors of Lead and Copper Mines in Devon, Cornwall, Wales, &c., will find great advantage in the quality and cheapness of the Iron they require, by seeking quotations through the Advertiser.

MESSRS. TREVARTON AND CO., MINING SHARE DEALERS AND BROKERS, 5, ST. JAMES'S-STREET, PALL-MALL, LONDON.

THE MANUFACTURE OF NEEDLES.

The history of needle making is very obscure and vague; some parties assert that it was introduced into England by a native of India, in the reign of Queen Elizabeth, others that it was from Flanders, and many are of opinion that it was brought here by the Moors of Spain. Our object, however, is not so much to inquire by whom, or from whence it originated, as to point out the process and progress of the manufacture, and to show the improvements and perfections of the needle. No longer than 60 years ago needles were begun and finished by the makers in their own homes, and the first manufactory known was at Whitechapel, London, where a person named Mackenzie succeeded in making a superior needle to any at that time known: that individual becoming embarrassed was about to go to Ireland, but being found by a creditor at Liverpool, of whom he had purchased needles in the plain state, was not permitted to proceed without payment; not being able to satisfy the demand in money, he gave up the tools, by the means of which he had obtained to the superiority in the finish of his needles. Upon becoming possessed of these tools, and returning into Warwickshire, the party, whose name was Rawlings, commenced making a far superior needle to any yet seen in the country. The finish he was enabled to give to the needles brought them into request, and labelling of the common qualities with the Whitechapel labels, in a very short time that trade was entirely lost. Shortly after the drilling of the eye of the needle was found out by a nephew of Rawlings, named Michael Morrell, and who had also been his apprentice.

This was about the year 1790, but in consequence of the drilling of the eye when the needles were made by hand being found too expensive a process, and not perfect, it was laid aside for some time, until he had invented machinery for making the eyes, which was some time in being brought to perfection, in consequence of trying to make 100 needles by one operation, instead of the present mode of making only two at a time. But it has been reserved for Mr. A. Morrell, son of the above M. Morrell, whose ingenious machinery we have had the pleasure to inspect in operation, to greatly improve the make of needles, that we imagine the trade must be, or near to, perfection. Previously to any improvement by Mr. A. Morrell, needles were all made with *square eyes*—his first invention was the *round or drilled eye*. The next the *oval*, which made the eye two sizes larger than the round or drilled eye. Subsequently he invented the *grooveless needle*, which are imitated by the trade under various terms, such as locomotive, graduated, grooveless, &c. The superiority of these needles consists in the groove being *above* instead of below the eye, for the silk or thread to fall into, forming one uninterrupted round, thereby passing through the work with facility and ease, doing away with the dragging so much complained of in the old make; but the eye being *oval*, the common mode of drilling was not sufficient to make them perfect, and rendered them liable to cut the thread. It was then that he invented machinery (for which he obtained a patent) for *burnishing the eye*, which removed the burrs, feathers, or sharp edges from the inside, left by the common mode of drilling, rendering them entirely impossible to cut the thread. His latest improvement is the invention of the *egg-eyed* cotton and worsted darning needles, the eyes of which are three sizes larger than he common make, and are easily threaded by ladies of advanced age.

ATMOSPHERIC INFLUENCES.—NEW SERIES—NO. X.

BY FRANKLIN COXWORTHY, AUTHOR OF "ELECTRICAL CONDITION."

The several changes that have taken place in the atmosphere, from the period of chaos to the formation of that which now surrounds the globe, and the effects they have produced on the mineral and vegetable kingdoms, have formed the subject of the preceding papers. Assuming the law of gravitation to be universal, we have shown that there must first have existed an atmosphere of carbonic acid, which, on its decomposition by vegetation, gradually gave place to one of oxygen, the electrical influence of which produced evaporation, or the separation of the elements constituting water, to such an extent as to prevent their re-combination under the influence of "cold," and by its action on dead vegetable matter caused the evolution of carburetted hydrogen—our atmosphere being compounded by vegetation, the *rationale* of its formation being given in No. VIII. These periods, then, were all of a composing or forming nature; the beds of carbonate of lime, of sand, of granite, of coal, and our other mineral wealth, were deposited during these respective periods, and we shall now endeavour to show that by an adverse process, mainly, if not entirely, referable to the operations of man, influences are produced on the atmosphere which cannot fail in entailing its concomitant consequences, of which cholera and potatoe disease are but forerunners.

In this inquiry reference to the opinions of others has hitherto been carefully avoided; but as the whole of our subsequent investigations will be identified with the principles of "heat," the consideration of the several facts to which we shall have occasion to refer, and which are of rather a novel character, will be much facilitated if the gigantic errors which generally prevail be removed; for although our amount of information may preclude, as yet, the formation of a correct or definite theory, unsettled ideas will not offer to our progress the amount of obstruction it must necessarily receive from settled prejudices—errors, however, that are now fast yielding to the influence of discussion, and that must necessarily share the fate of the hygrometer, with which they are identified, and the evidence we can now offer of a yielding will not, we think, be deemed less conclusive than the great difference which, all at once, has sprung up in the opinion of "scientific men" of the value of that instrument.

The papers to which we are about to refer are three in number, and occupy most of the space of that venerable magazine, the *Philosophical*, for the month of July, 1851; but as the third is little more than an echo of the first, which alone occupies 21 pages of the Journal, we shall make such extracts from the two first only as may suffice to convey some slight idea of the amount of absurdity that has for the last 80 years abounded mankind.

"On the moving force of heat, and the laws regarding the nature of heat itself, which are deducible therefrom." By B. Clausius.—"Carnot proves that whenever work is produced by heat, and a permanent alteration of the body in action does not at the same time take place, a certain quantity of heat passes from a warm body to a cold one. For example, the vapour which is generated in the boiler of a steam-engine, and passes thence to the condenser, where it is precipitated, carries heat from the fire-plate to the condenser. This transmission Carnot regards as the change of heat corresponding to the work produced. He says expressly that *no heat is lost in the process*—that the quantity remains unchanged. And he adds—'This is a fact which has never been disputed. It is first assumed without investigation, and then confirmed by various calorimetric experiments. To deny it would be to reject the entire theory of heat, of which it forms the principal foundation.' I am not, however, sure that the assertion that in the production of work a loss of heat never occurs is sufficiently established by experiment. Perhaps the contrary might be asserted with greater justice, &c." "That when equal volumes of different gases, at the same pressure and temperature, are compressed or expanded, an equal fractional part of the volume, the same absolute amount of heat is in all cases developed or absorbed."

Letter from Professor G. G. Stokes, dated Pembroke College, Cambridge, June 12, 1851.—"As I do not see the remotest prospect of agreement between Professor Challis and myself, respecting the principles of hydrodynamics, I think it time to fulfil the promise which I have already made of discontinuing the controversy. As, however, I have seen nothing to shake the firmness of my conviction, which I have already expressed, that the *new equation* is both unnecessary and untrue, I request that you will have the goodness to record my protest against it. As I do not mean to continue the controversy, it would not become me to discuss the contents of Professor Challis's last communication; there is, however, one point in a former article which I will briefly notice. In alluding to the experiments by which it is (I conceive) shown that compression does directly raise the temperature of air, Professor Challis speaks of the heat developed by compression as being, in the first moment of its generation, in the state of radiant heat. I do not know what Prof. Challis's notions respecting the nature of radiant heat may be, but according to my own, I cannot understand how the heat developed by compression can be the first instance in the state of radiant heat, or, if it were, how the observed effects could be produced."

We should observe that the reasoning throughout these papers is based on the doctrine that heat is material; and if this position were true, it is self-evident that Carnot is correct, since matter cannot be destroyed; but if heat be merely an electrical condition, or an effect produced during the expansion of matter, as in combustion, as well as in its contraction, the reverse of the assumed position, it cannot be a matter of surprise that the very conditions which are regarded by one party as the foundation of the theory of heat, should be considered by the other as utterly opposed to it. What, indeed, would the fathers of mathematics have said, could they have contemplated that their labours would lead to such spurious offspring as the articles to which we have just referred? In its application to matter and mechanics it is indeed a noble science; but, as if to ridicule the ridiculous, attempts are made mathematically to reason on a question not of itself reducible to figures, and then, as a starting point, to select, not the cause, but the effect. If these gentlemen would descend from their professorships to the kitchen, they would there receive instruction that would laugh to scorn their *equations*. They would observe that the air, on its passage through the fire, and conversion into carbonic acid, vapour, and nitrogen, is vastly expanded in volume during the evolution of intense heat, and acquires a velocity sufficient to turn a smoke-jack; that the water in the pot likewise expands into steam, and the pudding which it surrounds, if properly made, greatly increases in size; and, lastly, that the piece of beef in front of the fire, on the spit turned by the smoke-jack, whilst it is destined ultimately to undergo a putrefactive process in the stomach, by the generation of a dark-coloured matter, such as gravy and the "browning" of the meat, affords evidence that it is under the influence of a highly electric atmosphere, or "heat by radiation"—effects, in fact, both as regards the chemical (not mathematical) compounds formed, and all external appearances, diametrically the reverse of those of heat by putrefaction.

ASTONISHING CURE OF A VERY BAD LEG OF THIRTY YEARS' STANDING BY HOLLOWAY'S PILLS AND OINTMENT.—The wife of Mr. George Bourne, butcher, of Stockton-on-Tees, suffered for fully 30 years with a dreadful bad leg, apparently originating by the bursting of a vein internally. The pain was intense. The most eminent medical men in the neighbourhood tried to cure it, but in vain: at last she was induced to try Holloway's Pills and Ointment, when, to the astonishment of herself and all who knew her, the leg in the course of eight weeks was thoroughly healed and cured, and has remained sound and free from pain for the last nine months.—Sold by all druggists, and at Professor Holloway's Establishment, 94, Strand, London.

SUBSTITUTION OF CAST-IRON FOR WOODEN SLEEPERS

BY R. W. KENNARD, ESQ.

[Continued from last week's Mining Journal.]

In consequence of these objections, which must be admitted by all parties, even by those who have only superficially examined the question, Mr. Peter Barlow conducted sundry experiments, the results of which we shall now concisely exhibit. His object was to ascertain "whether the weight of iron required to obtain the necessary bearing surface, and, at the same time, to insure against fracture, would make the cost greater than the value of the increased durability of the material;" and the very remarkable result at which he arrives is—"that the cost is even less than that of a temporary wooden road."

A prejudice existed against the use of iron, originating in the erroneous notion that *mere rigidity* is the cause of the uneasy sensation produced in travelling over a block road. This, however, is a mistake. The discomfort is not occasioned by rigidity, but by rigidity combined with unevenness and looseness. Let there be the most absolute rigidity, and yet let the surface over which the wheel revolves be perfectly smooth, and the sensation produced by the blows occurring in the passing of the engine will wholly disappear, and the motion rendered perfectly smooth—to use Mr. P. Barlow's words, "There is no doubt, in practice, that the rails and wheels cannot be made as smooth as polished steel, but they can be made a close approximation when the looseness and blows are overcome; and what unevenness there remains will be cured by the springs, and by the use of wooden wheels, which is a much more reasonable use of wood to obtain elasticity than by laying the whole road on wood—thus increasing the tractive force and incurring other evils."

We shall now state concisely Mr. Peter Barlow's experiments, together with his estimates of cost, compared with those of timber construction. The first form suggested to Mr. P. Barlow, and subsequently laid down on the North Kent line, was as follows:—"The cast-iron plates are cast in lengths placed longitudinally, and at the joints three chairs are cast on one plate, which is strengthened by a rib at the upper as well as at the lower side, by which arrangement the rails are united at the joint, so as to make one continuous bar, equally strong throughout. The rail is fastened by a wooden key underneath; by this position of the key the cheeks of the chair fit the rail exactly, which has the advantage of placing them under the web of the rail, which protects them in the event of a carriage or engine getting off the line; but it has the disadvantage of rendering it necessary to string the chairs on the rail, which makes it difficult to remove a rail if required." The weight of iron in a 15-foot length of rail in this experiment was 8½ cwts., and the bearing surface 13½ feet. Mr. P. Barlow presents the following estimate of cost of materials for a mile of permanent way, assuming 6½ tons for wrought-iron and 4½ tons for cast-iron, the weight of rails being 75 lbs. per yard, which Mr. P. Barlow deems sufficient, there being six bearings, instead of five, as in the ordinary road:—

236 tons rail, at 6½ tons.	£1534 0 0
300 tons cast-iron, at 4½ tons.	1387 10 0
8484 keys, at 2d. each.	70 8 0
5 tons tie-rods, at 14d.	70 0 0

Total £3061 18 0

Comparing this with Capt. Huish's estimate for a five-sleeper road, which, although liberal, is not sufficient for a road with six bearings:—

236 tons rail, at 6½ tons.	£1677 0 0
300 tons cast-iron, at 4½ tons.	1225 0 0
8484 keys, at 1d. each.	153 0 0
5 tons tie-rods, at 8d.	32 0 0
Ballasting, 6000 yards, at 1s. 6d. per yard	450 0 0

Total £2418 15 0

Mr. P. Barlow informs us, however, that there are some lengths laid down with a weight 40 tons per mile less, and nearly 200/- per mile less cost, which stand perfectly well, and there is no doubt that a less weight of iron than that generally used would be sufficient.

We understand that the weight of iron, and cost of the new lines, as laid on the South-Eastern Railway, where the half chairs are used, are as follows:—

Rails, 220 tons, at 5½ lbs.	£1177 0 0
Iron sleepers, 280 tons, at 4½ lbs.	1225 0 0
Bolts and nuts, 9 tons, at 17s.	153 0 0
Tie-rods, 4 tons, at 8d.	32 0 0

Ballasting, 6000 yards, at 1s. 6d. per yard

Total £3027 0 0

The weight and cost per mile, where the wooden-key sleeper is used, are as follows:—

Rails, 220 tons, at 5½ lbs.	£1177 0 0
Iron sleepers, 260 tons, at 4½ lbs.	1144 0 0
Keys, 9240, at 1d. each.	57 15 0
Tie-rods, 5 tons, at 8d.	40 0 0

Total £2418 15 0

Mr. P. Barlow informs us, however, that there are some lengths laid down with a weight 40 tons per mile less, and nearly 200/- per mile less cost, which stand perfectly well, and there is no doubt that a less weight of iron than that generally used would be sufficient.

[To be concluded in next week's Mining Journal.]

TO THE DEPUTATION OF THE COAL MINERS OF NORTH-UMBERLAND, DURHAM, AND LANCASHIRE.—(Concluded.)

BY GOLDSWORTHY GURNEY, ESQ.

The instrument which I have now before me, and which works well, was thus constructed:—A small glass cylinder, 4 in. long, and 1 in. diameter, about the size and thickness of a small phial bottle, was blown with two mouths and necks, one at each end. A glass tube, 1 in. diameter, and 3 ft. long, sealed at one end, had its open end cemented air-tight into one neck of this vessel. Sealing-wax, gutta percha, plaster of Paris, or any other air-tight luting, will answer for this purpose. Into the other end or neck, a tube, 2 ft. 6 in. long, open at both ends, ½ in. diameter, was cemented. The tubes and the connecting cylinder, the joints all air-tight, were now laid along a wooden staff, and secured to it by wire ligatures into the open end of the compound. Distilled water was poured until it rose up to about 2 inches in the working cylinders. Mercury was now poured in, so as to raise the water to the top of the tube. The finger was then placed tight on its surface, and the staff inverted, when the mercury and water changed places. The open end, the finger still tightly on, was placed under the surface of a cup of mercury. The finger was removed, and the mercury fell in the ordinary way; the water followed, and a vacuum was formed above its surface. The water was now in *vacuo*, and a quantity of air was seen escaping from it in little bubbles rising to the surface, as is usual when water is placed under the exhausted receiver of an air-pump. This escape of air would interfere with the vacuum, therefore the finger was again placed tight on the open end of the tube under mercury; the tube withdrawn, and the staff inverted; the mercury and water again changed places. The water, deprived of the air which it previously held in solution, came to the top, the finger was withdrawn, and a further portion of mercury poured in, so as to raise it again to the surface, as at first. No air bubbles will now escape. Some plan is essentially necessary for graduating the instrument to correct inequalities, because it is more than probable the proportion of areas you may seemingly obtain by measurement may not be mathematically true, for it is difficult to measure them exactly. The tubes may taper; the supposed cylinder may really be a cone, or anything else.

After having obtained the proper quantities of mercury and water to fill the tubes, and stand at their proper and respective levels, the water about half-way up the differential tube, and the mercury about half-way up the bulbous cylinder (which, if it does not approach in the first, we must add to, or take from, in the second filling), mark off accurately where the surface of the mercury stands, and also where the surface of water stands. Now pour mercury in the under cup or vessel until the surface of the mercury in it rises in the tube exactly an inch above this mark; make another mark here, and scribe off very exactly the height of which this inch of mercury had driven up the water. Again raise the mercury another inch, or any other known measurement, in the same way. By pouring in more mercury in the bottom vessel again mark off, very accurately, the proportional rise of the water on the differential scale, and so on, up or down, until the whole working ranges are obtained; thus the height of mercury will make its own scale or graduation of the water level. The division thus obtained may be subdivided at will.

The instrument I have is graduated on the differential scale into tenths of an inch. The diameter of the working part of the mercurial column being 1 in., and the differential tube being ½ in., their proportional rise will be as 16 to 1, so that every tenth rise of the barometer will move up the water column 16 tenths. This, I think, will be sufficiently sensible, and the graduations, perhaps, small enough for your purpose. You may, of course, make it more or less so.

Another way of graduating this instrument is to turn the staff out of the perpendicular, until the arc described shall occasion such an incline plane of the mercury as will rise it a given distance up its scale; the corresponding displacement up the differential tube may then be marked off. In the former arrangement the differential tube is sealed, and the water in *vacuo*. Here no error can arise from evaporation, or any other atmospheric interference. It should be observed that, if spirit be used instead of water, an atmosphere of its vapour will pervade the vacuum. If this amount of vapour was a constant quantity it would be of little consequence, seeing we have only to deal with differential changes; but its amount will vary, and be sensibly increased or diminished by change of temperature. This vapour will interfere with the working of the instrument, and require troublesome correction to be made for it. If you think the vapour of the water likely to interfere with the vacuum, and require correction, you had better use oil; in such case no possibility of error could arise from temperature or evaporation.

For measuring the heights of mountains, or obtaining absolute weights, a graduated correction may be made; but water without any correction seems to be sufficiently accurate for the purposes of pitmen or sailors. Perhaps I hardly need observe that the absolute weight of the atmosphere can always be read off from the mercurial column, making correction by allowing about a foot of water to be equal to an inch of mercury.

This instrument, so far as I know, is perfectly new; but the principle is so manifest, and the construction so easy, that it seems more probable it must have suggested itself to many. There are no objections to it that I can see; if there be, I think they may be removed. I shall be happy to confer with you on the subject, and assist so far as I can.

STEAM-BOILER EXPLOSIONS.—The jurymen who were impanelled on the inquest upon the bodies of the men killed by the explosion at the cotton mill at Hey, in Yorkshire, have forwarded a memorial to Sir G. Grey, as Secretary of State, expressing their conviction of the danger which in every case threatens the lives of the men when the boiler of the engine is in the building where they work; consequently, that it is highly desirable the boiler should always be erected in a detached building, be provided with signal steam-whistle, pressure gauges, &c.; and that some legislative enactment is imperatively required for the preservation of life in such cases.

STREAM TIN-WORKS IN BRITTANY.—Lately there has been discovered in Brittany some valuable workings of stream tin, which contain also a considerable sprinkling of gold. The *Chemical Record* states that nearly all the littoral zone which separates the disemboguement of the Loire from that of the Vilaine contains a sufficient amount of oxide of tin to admit of profitable working. The oxide of tin contained in these alluvial tracts occurs under the form of either small rounded grains or of crystals, which not unfrequently are as large as nuts. It presents itself under many various colours—black, brown, violet, white, and citron yellow. Almost every part of this stanniferous deposit of Brittany is accompanied by spangles

MINES AND MINING.—No. IX.

BY EVAN HOPKINS, C.E., F.G.S.

Capt. Matthew Francis's letter, in your Journal of the 16th inst., must have been perused with great interest by those who invest their capital in legitimate mining. I wish all the valuable sets had such an efficient practical man as Capt. Francis to carry on the operations. He justly observes that mining is no lottery, if properly selected, obtained on reasonable terms, and worked judiciously and economically. It is painful to observe so many valuable mining properties continuing worse than useless to the shareholders, from the want of their being managed by men of practical experience. It is still more aggravating to the sufferers to find that the promoters and the captains who promised most not only do the least, but after wasting heavy sums from month to month, and bring all to ruin, are the most inconsiderate and the most audacious in their reports, and the longer they are tolerated the worse they get. Mr. Ennor truly observes that the majority of the mining speculations are never intended to make dividends; by so doing the speculations of the promoters would be spoiled. A steady and well-managed mine, like the Bedford United, for instance, would be of no avail whatever, inasmuch as the small dividends would keep the shares at a fixed value, and thus prevent any chance of a wide range of oscillations. A worthless mine is, on the contrary, the one wherein money is to be made by jobbing—i.e., from 10 to 50 per cent. interest, as usually advertised. Such mines may be stopped for months, without the public being any the wiser. Provided some accommodating good-natured person, dubbed captain, can be procured now and then to break a stone, send it to London, and protest that it is the best speculation in the county, and that it is the same identical lode as the Buller, Devon, or even Burr Burr, all is well, and the dupes remain content. The public are now getting tired of such proceedings. The time of such disreputable mode of acting is nearly over, and the day of legitimate mining enterprise, carried on by men of judgment and integrity on the principles of our great mixes, is now drawing nigh. It is the duty of every honest practical miner to show to the world that mining is as capable as any other branch of industry to be carried on with profit and regularity, if conducted by experience and integrity, and managed in offices and by persons kept free from jobbing.

Mining speculators and premium-hunters find now but few dupes so credulous as to be led away by the old loose and inconsistent reports; and even good sets, obtained on fair conditions, the public are beginning to find are of no avail, unless the essential qualifications reign supreme in the management. A mine without the advantage of good practical experience, business habits, strict integrity, prudence, and perseverance, becomes a source of trouble and expense. Many mines, which have been for a long time losing concerns, have been made profitable, with the aid of managers possessing only regular business habits, without any practical knowledge of mining; whereas the twaddling and quack practicals, with their ramarole reports, neglect their duty, waste the money, and bring mining into disrepute.

We need not enter into the abstruse subject connected with the formation of mineral veins to give an opinion on the merits of the majority of the mines now in operation. We can prove what will be the result by looking at the mines, and the parties who manage them, as correct as a simple "Rule of Three." These are the causes why capitalists feel reluctant to invest in mining. Many thousands of pounds would be immediately laid out in our home mines, had there been sufficient confidence in the general management, and the offices kept unconnected with jobbing purposes.

COMPRESSED AIR ENGINE.—We are glad to learn that Mr. Parsey, the inventor of this system of propulsion, has at length an opportunity afforded him of proving its value. An engine on the principle is now constructing, and which, we believe, will be ready for running on the Eastern Counties Railway in about a month, under the auspices of the board of direction.

RAILWAYS.—We refer our readers to the able paper by R. W. Kennard, Esq., on the construction of railways, now in course of publication in the Journal, as containing some pertinent observations on iron formation. The view Mr. Kennard takes is not new to us, for we have, for several years past, from time to time noticed Mr. S. Reed's "improved railway chair," and similar statements have been made as to the superiority of iron railways over every other mode of construction. At the time this subject was first brought before the public, iron was at such a price as to preclude the advantageous adoption of it; but at the present day it is otherwise, for the reduced value of that metal no longer presents an objection, and now holds out every inducement for its use, as being the cheapest and most durable material for permanent railway lines. Hitherto the only question has been that of expense, which no longer exists. With such abundant means, why should not the highways of this country (for railways are now essentially so) be thus formed to remain for years to come monuments of the skill and foresight of the present age; and, by the adoption of iron, give an impetus to a branch of commerce that would constitute one of the great staples of Great Britain, and in which an almost incalculable amount of capital is embarked?

PREVENTION OF ACCIDENTS ON THE GREAT NORTHERN RAILWAY.—With a view to prevent accidents in the tunnels on this line, it appears that underground telegraphs are now being laid through the several tunnels on this railway, so as to enable the man stationed at one end to communicate with the man at the other end, when a train goes in or comes out of the tunnel. It is intended that no second train shall be allowed, under any circumstances, to enter into a tunnel until a communication is made that the first train has passed out. On Saturday, at the Weilwyn tunnel, one of Mr. Henley's magneto-electric instruments, which are to be used, was connected at each end, and the first trial on this line was made by the patentee and Mr. Hitchins, in the presence of some of the railway officials, and Mr. Dobson, from Mr. Cubitt's, the engineer. The trial was reported as most satisfactory. The great features in Mr. Henley's instrument are fully detailed in last week's *Mining Journal*. No battery is required, no attention necessary to keep it in working order, and its action is always certain.

STEAM SUPERSEDED—A GAS ENGINE.—An interesting piece of news from America is the assertion made in the Cincinnati papers that a Mr. Solomans, of that city, has invented a gas engine, which to supersede steam—"With common whiting, sulphuric acid, and water, he generates the gas: \$5 worth of these materials (says the *Nonpareil*) will serve to propel a boat across the ocean half dozen times, and if there be no leakage it will keep the boat in motion until it wears out. The fluid has a pressure of 540 lbs. on the square inch, while water has none, except that of gravity. Water at the boiling point gives a pressure of 15 lbs. With the addition of 30° of heat the power is double, giving 30 lbs., and so on, doubling with every addition of 30° of heat, until we have 3840 lbs. under a heat of 452°, a heat which no engine can endure. But with the gas 20° of heat gives 1080 lbs.; 40°, 2160 lbs.; 80°, 4320 lbs.—that is 132° less than boiling heat gives, a greater power with this gas, than 452° give by converting water into steam. The result is that it requires \$1800 of expense to run a boat to New Orleans and back again with the old engine, while this one will do the same work for \$50. Mr. Solomans has his engine in operation. It is of 25-horse power, and raises 12,000 lbs. up and down five times in a minute. He has it so planted that its power may be seen. The engine is so constructed as to be self-sustaining, manufacturing and pumping its own gas, while a small furnace, almost half as large as a common furnace for heating flat-irons, furnishes all the heat he desires. A handful of charcoal does the work, and his boiler is about as large as a good sized cannon ball." The idea of a gas engine is not a new one. In this case a most dangerous explosive mixture is made, which readily ignites; not with the whiting, but the carbon of the iron vessel in which the acid is contained. The greater its explosive power, the greater the danger. Every lad that has studied chemistry has fired off glass cannons charged with this kind of gas. The description above given within the quotation marks is taken from a Cincinnati paper.

IMPROVED STEAM-ENGINE.—Among the many very great novelties in the machinery department of the Great Exhibition, is the patented engine of Messrs. Simpson and Shipton, of Manchester. The prime mover may be assimilated to the common crank of the steam-engine enveloped in a casing, in which the steam is made to act direct, and by suitable slide valves, to bear alternately on upper and lower sides, each producing a semi-rotary effect, and thus keeping the crank in constant revolution. They show models of its application to screw-propellers, paddle-wheels, mill work, &c., and in the case of marine engines, the whole weight of them rests on the keel of the vessel. A well-executed diagram is also shown of its advantageous application to the locomotive superseding the cylinders and pistons, and acting direct on the driving wheels. The whole structure is also nearer the ground, lowering the centre of gravity securing a much more safe and steady motion.

The occasional announcement of the Mitre Life Office, that in connection with their policies they grant loans to beneficed clergymen, suggests a word or two of comment on this kind of business. While, as a rule, we are not very partial to life offices which make a general use of loans as a means of extending their business, it is at the same time obvious that a legitimate employment of capital may occasionally be made in this direction; more especially for the accommodation of particular classes, whose interests are more specially regarded by offices addressing themselves to such classes. Above all, the clergy, while remarkable for their regular mode of living, and proverbial for their longevity, and thus presenting an excellent basis for life assurance, have frequently most legitimate occasion for temporary advances—e.g., for fines on preferment, for the improvement of their benefices, and for public purposes connected with their avocations. On the one hand, they may obtain this temporary accommodation with a double advantage to themselves, on the collateral security of a life policy, inasmuch as the policy itself is a valuable piece of property, which every clergyman, whose income expires with himself, is bound, out of consideration of his family, to provide himself with, if he can possibly spare the means; and on the other hand, the moral status, and generally permanent and improving position of a beneficed clergyman, is a security in addition to that which may possibly be demanded by an association, not so conspicuously attaching to other classes of the community.

Original Correspondence.

THE GERMAN SCHOOL OF GEOLOGY—(Concluded.)

BY DAVID MUSHET, ESQ.

SIR.—I would also ask these people, who know so much of Nature's early doings, in what state the crust of the earth was before it was melted; what did it consist of; what was the object of melting it; what was the origin of this melting heat; as it proceeds from the centre, is there any chimney to maintain a draught, and carry off the products of combustion; what quantity of matter has been actually consumed in melting a globe 7000 miles diameter? Smelting fires are, in general, considerably larger than the substance melted. How, then, was the less made to contain the greater, and the fire put into the centre of the crucible instead of the crucible into the centre of the fire? Can M. Faber's "practical and theoretical study" adduce any instance in which he has melted a globe to the surface by a fire contained within it? When did the fire go out; because it is quite obvious, unless the heat diminished from within, that the supercetes must dissolve into the liquid it floats upon, instead of congealing over it? How is it that the granite presents none of the appearances of earths which have been submitted to vitreous fusion? Why is there none of that wavy linear configuration, streaks and stripes of divers colours, presented by earths of varied composition when reduced to fluidity by force? Why does a piece of granite taken at the surface, and another piece taken from a quarry, or a perforation in the solid mass, present no difference of texture? Why is it not the first translucent, and the other opaque and devitrified? Why is it impossible to detect in any part of the primitive rocks that honeycombed porosity which is an inevitable attendant on the escape of gases through congealing fluids, constituted of numerous elements? Why, on the contrary, are these rocks in every particular as dense and compact as the admitted aqueous rocks? Why are the prisms, presented by the primitive rocks in situ, rhombs and parallelopipeds, with long and continuous axes, bearing not the slightest resemblance to the radiated, irregular, and curved fractures of the cracks of cooling slag? Why is the lid or cover of granite quarries not a scum of porous lava, such as floats to the surface of melted matter? Why, on the contrary, does the gravel and loose stones which cover the firm rock resemble so exactly the cover of any other quarry—say, of the Pennant rock of the coal basins—that no quarryman, unless he were blessed by the instructions of a philosopher or geologist, could ever dream that fire had been at work in one case and water in the other? These are a few of the questions which rational men would wish to have answered, before being compelled to gulph the fiery bolus of "men entitled to an opinion."

The truth is, the theory of the igneous origin of granite is one of those monstrosities which men delight to hold, merely because it is monstrous. We need not raise Aristotle from the dead to tell us the love of the marvellous is one of the strongest of human propensities. We like to triumph over common place; and the philosopher imagines, with a conceit of superior wisdom, that he has trampled above vulgar prejudice and ignorant prepossession, by according his calm assent to that lake of fire which the unlearned are not aware they walk upon. But a theory more entirely superfluous—more contrary to every known fact, and more unsupported by every thing but the imagination—cannot be found in those records of extravagance and conjecture which schools have flattered themselves by dignifying with the name of science. It could hardly have been thought of, but for a few small holes, found at great distances on the surface, which occasionally spire fire, just as if were asserted from the presence of a pimple on the skin that the arms and legs, the features and the whole body, had been convulsed into shape and being by such eruptions. The only facts more than this which have been adduced to support it, are the absence of organised remains in the primitive rocks, and a more or less regular increase of temperature at increased depths from the surface; but it would have been strange indeed if that which existed before life had displayed the remains of life; and the other argument would equally prove the existence of vitreous fusion at the bottom of a cucumber bed. Has the human body an igneous nucleus? The skin is cooler than the interior; and the cellular substance of the lungs is much more like slag than granite. Spurious philosophy, which has no foundation, deserves only condign ridicule. It is the dream of Alnashar, who spurns the solid advantages which lie beneath his foot, and builds a baseless fabric of romance. Germany has always been the abode of mysticism; and now we have an outpouring of her goblins from and upon the practical county of Cornwall. M. Faber may find, before his tour is ended, that not goblins only, but geologists, sometimes visit that county; and that we English also possess "men entitled to an opinion." If he will only read the Book of Nature without red spectacles, he need not regret all the crambo which is reposing on his shelves at home. He has cast quite enough of it already. They are but legends of the Hartz Mountains; we like something more substantial than the dreams of superstition. Superstition is a fondness for supernatural tales, based on no credible evidence; and the igneous theory is a climax to the definition.

The reason which M. Faber gives, to induce the reception of the views of M. Elié de Beaumont and M. Leopold Von Buch, is as strange as the doctrine itself. He admits, or asserts, that nothing is known on the subject; yet, while waiting, we had best accept the opinions of persons upon a subject of which they know nothing. Surely, no opinion is better than such an opinion as that. These savans have reputation and talents; but what do these avail if they are employed on a wrong track? The racer who turns his back upon the goal, will get astray in proportion to the power of his speed. Without a foundation on fact, the greatest talents labour in vain. The power of the engine makes the mischief only more disastrous when it leaps off the rail. M. Faber must, therefore, go over the ground again, and convince us he has a good permanent way, before we English practical miners will take a fare in his German train.

MINING AS AN INVESTMENT.

SIR.—It has too long been the fashion amongst certain individuals, or, perhaps, rather classes of the community, to decry all mining pursuits as hazardous speculations, or mere lotteries, and even to estimate the more enterprising adventurers therein as men fully bent on their own destruction—eagerly pushing their devous way amid the earth's dark strata, only to break through the last layer of its mystical crust, and then topple headlong into gloomy Tartarus! The persons who pass these indiscriminate wholesale condemnations on mining enterprise are, for the most part, made up of the plodding drones and "safe gentry" of this matter-of-fact age, whose vested interests, knowledge, and tastes are foreign to all that appertains to such pregnant and creative undertakings. It, however, not unfrequently happens that the cupidity of one or other of these veritable money-grabs is excited by the "miner's luck," or, mayhap, the high-sounding promises of some spurious report; and forthwith, without investigation, or the requisite enquiries, he makes a grab; when, lo! if he comes "empty away," as in all probability in such cases he will, great is the cry, and uncensing the declamations he henceforth raises against all mining speculations.

It is, therefore, most desirable that men duly qualified by their daily avocations in the grand field of mining enterprise should frequently lay their sound and legitimately acquired knowledge before the world, in order to clear mining from all unmerited imputations, and to dispel those clouds of prejudice which too commonly obscure its more inviting characteristics, and prove the greatest obstacles to its successful progress. Mr. Matthew Francis, in his letter, headed "Is Mining a Lottery?" which appeared in your last week's Journal, has set an excellent example, in this respect, to his practical peers, and as its ultimate good effects cannot but be most apparent to every one who desires to have mining set forth in its true colours, as an investment for capital, it is to be earnestly hoped that, in due course, they also will favour the community with the results of their respective practical operations.

Such a mode, if generally adopted among professional men, would not only furnish some excellent criteria by which to judge of their probity and comparative skill, and establish valuable data as to the true character of mining, and its beneficial progress, but enable the public to form some very equitable comparative estimates between mining as a speculation and the legion of company-schemes, of all shades and grades of rivalry, daily vaunting forth their several pretensions to the public preference. Take, for example, a retrospective glance at railways, and it will be seen that if, in a similar period, mines ruined their thousands, railways ruined their tens of thousands. In the former, too, there is always something tangible and palpable in the way of actual and indicative evidence to advert to, whilst the latter class of speculations, for the most part, present nothing but the inflated statements of interlocutors.

Mr. Francis has instanced eight or nine mines in Cardiganshire, selected and managed by himself and brothers, already respectively paying fully 50 per cent. on the capital invested; and I have much pleasure, from an intimate personal knowledge of facts, in bearing testimony to the correctness of his intimation that this list could there be vastly extended, both numerically and in statistical importance. Indeed, I have but lately given the most special attention to the mineral resources of this renowned district, and spent scores of days in solitary, but most interesting and instructive, wanderings amongst

its towering hills and (more inland) almost desert wastes, for the purpose of investigating its geological features, its several mines, and tracing the most prominent of its well-defined and spacious mineral lodes; and certainly, I may now unhesitatingly affirm, that a nobler, a more richly stored field, can scarcely be desired, offering as it does every facility to the practical operations of the enterprising miner, and affording most ample scope for the profitable employment of almost any amount of capital.

It would be foreign to my present purpose in offering these few hasty observations to attempt to adduce a series of instances in corroboration of this opinion; indeed, they are so numerous and so important in their several bearings, &c., that nothing short of a succession of papers could do justice to so elaborate a subject. But it may convey a tolerably correct notion of the intrinsic value and ore-bearing capabilities of many of the lodes, when it is stated that Cwmystwyth with Silver-Lead Mine, in ten years ending 1846, returned upwards of 100,000.; the Lisburne Mines, upon a trifling outlay, have divided 64,000.; Cwmsymlog produced a net profit of 2000. per month, for a lengthened period, to Sir Hugh Middleton, of New River notoriety; not to mention Goginan, Daren, and many others of closely approximating importance. The vast mining capabilities of Cardiganshire are, however, becoming at the present active period of mining pursuits daily more highly appreciated by the mining community; and as the lords of the soil, stimulated by the liberal and excellent example of Pryse Lloeden, Esq., M.P., are lowering their rents to a sufficiently encouraging scale, an additional impetus will be given to the explorations and mining operations, which at the present period are being so extensively and spiritedly carried on in the county.

When persons embark their money in mining explorations, &c., they should not be unmindful, that though there may be many blanks there are also many prizes; and that when they do turn up, they are not unfrequently of such magnitude as to make the fortunes of the respective adventurers; it is therefore, unfair to place mining as an investment for capital on a par with the more ordinary channels for its profitable employment, which, though they may continue to pay a certain, and usually very small, per centage yearly, are not only, for the most part, subject to a variety of contingencies, but in themselves offer no such chances of sudden and enormous emolument as may be reasonably calculated upon in the prosecution of legitimate mining adventure. And we may rest assured, that with the host of observing, intelligent, well educated men already in the field, and with a growing competency to appreciate the phenomena of Nature, and to practically apply the principle so clearly elucidated in Mr. Hopkins's excellent work on "Terrestrial Magnetism," the day is even now not very far distant when the shoals and quicksands so long believed to beset the highways to mineral wealth will be considered fewer and farther between than those which lurk in the channels of commercial enterprise; and moreover, that the embryo Mining Exchange will then (as being of a less speculating character than the region of "bulls and bears") become a formidable rival to the Leviathan stock mart of Lombard-street, so long the manouvering insatiable monopolist of the monied community.

Wales, August 20.

JOSEPH HOLDSWORTH.

MR. HOPKINS ON "TERRESTRIAL MAGNETISM."

SIR.—In consequence of the high commendation bestowed by a friend of mine on Mr. Hopkins's work, I have been on the look-out for the second edition thereof, the first being exhausted. Can you inform me when it will appear, as I want to possess a copy? I have not read it. I perceive that Mr. Musket speaks very highly of it. Until that gentleman called our attention to this work in the letters recently inserted in the Journal, I had thought that the cause of mineral veins was not known; I now learn that we have only to read Mr. Hopkins's work to know the cause of such formations, and I trust it will be carefully perused by the mineral vein disputants, so that the long-continued controversy may be terminated, and all the angry feelings excited thereby buried in oblivion.—Aug. 26.

[Mr. Hopkins's new edition is in the press, and will be published about November. Communications regarding the value of the work with reference to metalliferous deposits have been received from Australia, Chili, and Peru, highly gratifying to the author, of its utility, and we are informed that the chapters on mineral veins will, in the new edition, be more extended and more fully illustrated, so as to render the subject still more practically useful to miners.]

R. S.

[Mr. Hopkins's new edition is in the press, and will be published about November. Communications regarding the value of the work with reference to metalliferous deposits have been received from Australia, Chili, and Peru, highly gratifying to the author, of its utility, and we are informed that the chapters on mineral veins will, in the new edition, be more extended and more fully illustrated, so as to render the subject still more practically useful to miners.]

ILLEGITIMATE MINING.—No. IV.

SIR.—In reply to the question of "H. Edwards," I have to assure him that I did not think the mining agents named by me were "the only competent persons to give an honest report on mining," but I do think—nay, am sure—that Cornwall does not contain 100, if any, mine captains superior to those gentlemen in point of ability for reporting. Mr. Edwards says "the writer must certainly have some object in view." Of course I have, and I will frankly inform Mr. Edwards what that object was. My object was simply to put dishonest capitalists in possession of the names of agents who would furnish honest reports. I did not say that I gave a complete catalogue of honest agents, for I know there are many more equally honest; and I said in my letter that "more of the same class might be named." The agents whom I named were those of that class which first occurred to my mind. My sole object in writing on the subject of illegitimate mining is to expose evils, with a view to their correction; and I have much to write when opportunity occurs.

Cambridge, Aug. 26.

ERRATA.—In No. 3, for "Capts. Richard and Josiah Vivian," read "Capts. Nicholas and Joseph Vivian; and for "places," read "phrases."

ILLEGITIMATE MINING.

SIR.—I noticed your correspondent, Mr. Ennor's, remarks in last Saturday's Journal, with respect to a multitude of mines having been started during the last year or two—many of them with a view to premiums, doubtless without regard to the value of the undertaking. I know of several instances where sets have been applied for that no respectable or honest man would think of risking a shilling in, and several as valueless have been obtained and brought out into companies, and lengthy reports written week after week, as if a mine were really at work. Such conduct can only be supported by a number of persons who encourage such doings merely to suit a certain purpose. I know of mines having been quoted in your Journal, and I believe shares actually sold to persons residing out of this county, at 10s., 15s., and 20s. premium, in valueless property; but I think, with Mr. Ennor, that the days of such unprincipled transactions are numbered. One evil, however, I think exists to a very considerable extent, and that is—persons pretend to manage and inspect mines who really are quite ignorant of mining, or even of the strata which is likely to be productive of mineral to any extent. It may be all very well for such persons to charge from 5s. to 50s. for two or three days' journey, and the filling a couple of sheets of foolscap with what I have repeatedly heard talked of as sheer nonsense—the writers in most cases appearing to be ignorant of the true nature of the subject as the paper they write on. Consequently, Mr. Ennor's remarks are quite just and true; and it is but fair to the parties imposed on that such a system should be exposed; and the sooner the better, that the public may be protected, innocent and unsuspecting persons being continually duped. I am aware of several instances which have recently come under my notice, and I know of many where persons of property have been deceived and defrauded, the knowledge of which frequently deters others from embarking in mines to a considerable amount. I trust, Mr. Editor, you will continue to expose such conduct through your valuable Journals.

R. HOOPER.

MINING CORRESPONDENCE.

SIR.—I sometimes amuse myself by glancing over that portion of your paper called "Mining Correspondence," and I have always been at a loss to conceive why, or for what purpose, such nonsense should be weekly thrust upon the notice of your readers. Surely nobody can be found weak enough to pay attention to one-half the twaddle published under this head. For instance, take the following imaginary "report" as it is called, and it will be found far more sensible than one-half of those published for the purpose of "giving every information with respect to our mines!"—

In the 450 fm. level, west of Dinefodum's shaft, the ground is more favourable, lode producing rich lead. The stopes in the 440 fm. are rather less productive. The 330 fm. presents better appearances; the stopes

and followed the example of his practical neighbours in the management of mines, he would have avoided many troubles, and would not be so beset, as he is at present, by anxious adventurers and needy labourers. Poor man, I pity him, with all his faults, and I hope he is not too old to learn and grow wiser. Why fight with shadows, and neglect the substance? Would it not be better to give a demonstrative proof of "practical" knowledge, by the extraction and conversion of the ore into money than bandy words on its origin? Is it true that he still expects to get a fine crop of silver, like cucumbers from a hot-bed, by hatching the old arsenical refuse? I did not believe it until I saw your last Journal, wherein he states, "For what purpose I retain it in the mine is my business," &c., meaning, of course, the precious heap from which the proprietors were to be satisfied with wealth; but according to the legend handed down to us, one fine morning the silver disappeared, and no one has found out, to this day, where it went to. The Gipsy King has been consulted, but it was beyond the power of his majesty to find out the secret. Although the "Practical" has gone beyond his depth, and although Nature will not furnish him with ready-made coin in lodes, yet I hope that she has been sufficiently liberal in the depth of "Camborne" as to supply the elements of prosperity to sensible and industrious men.—VERAX: August 26.

MINERALISED STRATA.

Sir.—Every intelligent miner of experience who has worked in more than one kind of rock, fully admits the importance of studying the whole variety of mineral ground, as well as the cross-courses, slides, and flookans; yet how few there are who really understand these subjects in such a manner as to apply them properly. I agree with the observations of Mr. Daniell—viz.: "They deal in like manner with the theory of mineralised strata; as far as their means enable them, they search for, and find the metalliferous veins themselves; and they judge from the appearance and character of such veins without reference to the surrounding strata; they generally persevere in laying open the lodes they meet with, even though they may not present any metalliferous properties, and sooner or later expect to reap an abundant reward for their perseverance and outlay." "This is the mode of procedure of the directors and managers of the Camborne Consols;" and, according to your correspondent's account, the system adopted by the best captains. I believe every word of it; and I consider that there is great credit due to Mr. Daniell for acquainting the public that such is the case. The readers of the *Mining Journal* who invest in mines will know in future how much dependence can be placed in the reports of those captains who fill their reports with "kindly strata," "orey killas," "tinny ground," and a number of other terms of no practical import to the writer. Instead of paying for the reports of such people, and sending them to Ireland and other countries, where the rocks may be different to what they may have been accustomed to, it would be preferable to send to such man as Mr. Daniell, and supply him with cash to search for the mineral. If he succeeds in obtaining it from chalk, the shareholders ought to be equally satisfied as if it came from the Cornish killas. Every person who has been long engaged in mining, must be fully aware that the above observations of Mr. Daniell are too true; and that the majority of the reports are merely made-up documents to gull the public, possessing no intrinsic value, often not even worth the sheet of paper they are written on; we, therefore, need not wonder that we are so often taken in by "old practicals," and lose so much money in mining.

St. John's Wood, Aug. 25.

AN OLD ADVENTURER.

THE MINERAL VEIN QUESTION.

Sir.—"Practical," in your last week's Journal, after trying to clear himself from the unfounded calumnies and insinuations so liberally bestowed upon him by what he terms the clique of geological theorist, says, "give me a fair field, I ask no more." I am quite agreeable that he should have his request, although I cannot see that mining has been much benefitted by what has emanated from him, more than that it has had a tendency to bring other parties forward, such as Messrs. Hopkins, Ennor, and Mushet—the latter of whom, although hit at so hard by "Practical," evidently understands what he is about, and need not fear the "rockets" or the "descending stick," unless there is more fire applied to make it ascend than there has been in the formation of mineral veins. "Practical" still insists "that the deep tin mines are the best and most productive in the country." It is quite evident from what has been previously stated on that subject that this does not apply to mines at present working more than 100 fms. deep. He also says that "every practical miner has borne out my statement; and that Dolcoath, once a rich copper mine, is now in her dotage a rich tin mine 250 fathoms from the surface." Who are the practical miners that have borne out his statements? it might have a tendency to throw some light on the subject if they would come forward with their names. Will "Practical" be good enough to state what profits Dolcoath has made on tin alone at the 250 fm. level, and at what time it was made, or whether they have some fresh discovery, and are now making the boasted profits? I wish not to speak disparagingly of Dolcoath; on the contrary, they have my best wishes for their success; and from the knowledge I have of their agents, they being persevering practical men, no doubt everything will be done that can be given to their employers dividends. Mr. Mushet did not assert that lead always arranged itself in north and south courses: it is well known to practical men that lead in this country is found both in east and west and north and south courses. Shephard's, in Newlyn, both the north and south mines, which were once very productive, are on east and west lodes; Cornubian Mine was also on an east and west lode; Wheal Golden, Penhale, and East Wheal Rose are on north and south courses. Tin and copper mines are mostly on east and west courses, or on canters, and the canters bearing from 10° to 20° east of north, to 40° south, are found most productive. I am not well acquainted with the St. Just district, and have not been in that locality for some years: as well as I recollect, the lodes generally are bearing about south-east and north-west. "Practical" states that the great Crinnis copper lode bears 45° north, whether north of east or west he does not state; if north of east it would be desirable to learn a little more on this subject, as the copper mines are very scarce in this country which pay with the lodes in that direction. Perhaps Capt. Webb would be so kind as to give the bearing of the Great Crinnis lode.

R. S. BRYANT.

CAMBORNE CONSOLS.

Sir.—It is not with the intention of stating anything about the mine (which from all that I have heard is a fair speculation) that I take up my pen; but as Mr. Daniell, under this head in your last Number, undertook to tell "Enquiry" "what is considered by the practical men of this district (Camborne) the only legitimate mining, taking it in the limited sense he applies it—first, they discard all illogical reasoning and delusive theories of terrestrial magnetism, with all its crude deductions and absurdities, as untenable." Be this as it may in Mr. Daniell's immediate district, I can assure him that there are many respectable agents who are not of his opinion; but on the contrary, put full credence in what he calls delusive theories. As these things are in more able hands, I shall leave it to them to state what may be required to establish the theory. "They deal in like manner with the theory of mineralised strata, and would not wait for the slow progress of infiltration of water uncharged with mineral substances; but, as far as their means enable them, they search for, and find, the metalliferous veins themselves, and they judge from the appearance and character of such veins, without reference to the surrounding strata, and thence form their conclusions of the most profitable mode of working to be adopted; and they generally persevere in laying open the lodes they are so fortunate as to meet with, even though they may not at first present any metalliferous properties, satisfied, and taught by their daily experience, that in this highly-charged mineral district they will sooner or later reap an abundant reward for their perseverance and outlay." A strange admission this, of how little practical men know of mining, as all the men I have met with, even those who say "where it is, there it is," have their different ideas as to where it is most likely deposits to be found. Now, I will endeavour to prove that all the practicals in the district alluded to are not as stated by Mr. Daniell, be their opinions what they may respecting igneous or aqueous theories.

Capt. Charles Thomas, of Dolcoath, immediately adjoining Camborne Consols, in his lecture at Camborne, states that "no tin mine, yielding a profit, has hitherto been found, except in what I shall call secondary granite, or in compact clay-slate (killas), connected or unconnected with elvan." He then goes on to describe the different kinds of strata that are most productive of ore, and some of those that are unproductive: the productive ones are what Mr. Ennor is pleased to term mineralised strata; but as it may, we find Capt. Oats, one of our most successful miners, always following a particular kind of strata (vide Capt. Pill's letter of May 24th), so that it is quite evident that those persons, who must be allowed by all hands to be practical men, differ widely in opinion from Mr. Daniell. And I may venture to assert that there are scores of agents who look more to the strata than even at the lode itself, as it is often found in congenital strata that the veins in places are small, and may not at first present any metalliferous properties. Satisfied from their long experience that certain strata are congenital for mineral, they persevere, and are often highly remunerated. The contrary would be the case in certain unmineralised strata, as most practical men, although like myself uneducated, know from their experience what kind of stone is most congenital for ore, whether it may be granite or slate, although they are not scientifically able to describe of what the different rocks are composed; and while they would not adventure 6d. in one place, they will lay out all they may be possessed of in another. Mining, undoubtedly, is more of a science than many are willing to allow; and though it may be said to be in its infancy, yet there are a great many heads at work, and we have, do doubt, already more light on this subject than formerly; and I sincerely hope we shall yet be able to mine with more certainty.—R. S. BRYANT: Truro, August 26.

CAMBORNE CONSOLS.

Sir.—When a man sits down with a determination to injure the property of his neighbour, he is seldom very scrupulous about the means by which he arrives at the end. The letter which appeared in your last Journal, bearing the

signature of "A Labourer in Camborne Consols," is so replete with falsehood, that for the present (and as it will be made a subject for enquiry in a court of law) I do not deem it necessary to further remark upon. I can, however, assure the writer, if it will afford him any consolation, that our 10 fm. level alone is daily turning out sufficient to meet the current costs of the mine, which in amount far exceeds his estimate; and I am happy to say our prospects are such as to render the puny efforts of the party to do mischief nugatory.

Camborne Consols, Aug. 26.

F. DANIELL.

THE WICKLOW MINES.

Sir.—Will any of your correspondents oblige me, through the medium of your columns, with a brief history of the Wicklow Mines, and what has been the nature of their connection with the Ballymurtagh and the Hyberian Mining Company. I am searching for information upon the subject, and I can only assure those who may favour me with any particulars upon the subject that I am not actuated in making this inquiry by any idle curiosity.

London, Aug. 27.

ISHAM BAGGS.

MINING IN CALSTOCK.

Sir.—Having heard it remarked by several miners and mine-agents that Calstock is likely to become a second Gwennap in mining importance, I thought, in my journey to the west of Cornwall, I would call, and gather some information for your Journal, in return for that which I receive. The first mine that came under my notice, after passing the Tamar, was East Gunnis Lake Junction; hers they keep the mine dry by a water-wheel, and will not require any steam-engine for a considerable depth, therefore the expense will be a mere trifle more than real labour in raising the ores. I observed some already at the surface, and it is likely to be a profitable concern to the adventurers. On my way from this mine to Wheal Zion, I observed to the left of the road, at the foot of an immense hill on the banks of the Tamar, Wheal Russell and West Wheal Russell. I understand the former is in an advanced state of working, already sampling sufficient to pay all cost, and its appearance warrants the assertion that dividends will be paid the adventurers at no very distant date. West Russell is also looking well, and throwing up ores for dressing. At Wheal Zion they are throwing up rich black ore, from a large lode, 15 inches of which (they say) is of good quality; but it appears that another party has taken more than one-half of the sett, which they call East Wheal Zion; and I hear that the captain and his brother are going to law about the remainder: this is to be regretted, as it is a pity so good a thing should be ruined by litigation. It appears that East Wheal Zion promises to be equal if not superior to Wheal Zion. The next mine I saw was Wheal Arthur. This is a good mine, dry above the adit. The adit level is 50 fathoms deep from the surface at the present workings. They have a fine course of ore on what they call the north lode, six feet wide, and only about 20 fathoms from the surface: they are now driving a cross-cut to this lode at a 35 fathom level, and also at the adit (50 fathom level); and no doubt they will have abundance of ores between the 20 and 50 fathom levels, which can be taken away without any expense of water-charge. In the southern part of this sett there is a lode 12 feet wide, with a beautiful strong gossan back; six men are driving south from the adit to cut this lode in the 50 fm. level; a great portion of the ground has been driven, and expectations are high as to the result. I observed some very fine ore at the surface; and it appears they are only in want of crushing power to bring large quantities to the market: to supply this power they are now in treaty with Messrs. Williams and Sons, the great copper ore smelters, for a powerful water-wheel and premises, which appear to be ample for the purpose. Close to this mine, on the west, we enter Wheal Edward Copper and Silver Lead Mine. Here is a good field for speculation, if speculation it may be called: all the great lodes of Wheal Arthur pass right through the length of this sett, some of which have been opened on, and which present appearances more than promising—one of them producing ores of good quality, not more than five or six fathoms from the surface. This lode forms a junction with a large lode near a cross-course just in the middle of the sett, and, no doubt, will in this beautiful mineralized country produce a body of rich ores. The cross-courses here are the Tamar Silver-Lead Mines' lodes. I should observe that this sett is very extensive, and in a beautiful situation. The next mine in my way was Drake Walls. This is an old tin mine, which has been at work a number of years, and employs a great number of hands—men, women, and children. They have a great deal of good machinery here, and all the surface dressing, &c., appears to be well laid out, with plenty of steam and water-power: the mine is making a very fair return at present. On the way to Callington, and on reaching Helston Down, the Great Helston Down Consols Mine presents itself, and having heard of a great improvement there, I visited it, and saw some beautiful rich ore, and was told by one whom I could rely on that the lode in the bottom of the mine would produce from six to seven tons of very rich ore per fathom; so that there actually must be tens of thousands of tons of ore in the mine. On my way to Callington I could see several other mines which I should have liked to have visited—Calstock United, which is well spoken of in this neighbourhood, Wheal Prosper, Wheal Baring, and others; and I was told there were several mines in the north part of Calstock which I had not seen—viz.: Wheal Williams, South Maria, South Josiah—all very promising they say; and indeed I don't know why they should not be productive, for the ground in the neighbourhood appears to be all mineralized, and, no doubt, will be found to make good the assertion that Calstock will prove to be another Gwennap.

AN ADVENTURER.

Liskeard, Aug. 26, 1851.

GREAT COWARCH SILVER-LEAD MINING COMPANY.

At a special general meeting of shareholders, held at the offices, Bucklersbury, on Thursday, the 28th inst.

CHARLES BURLA, jun., Esq., in the chair.

Mr. SHERMAN (the purser) read the notice convening the meeting, after which—The CHAIRMAN said, before he requested the purser to read the report of the committee he had three or four observations to make. It was necessary to explain that the period of calling the shareholders together had not been earlier; because, as they might be aware, their consulting engineer, Mr. Adam Murray, had been absent from England for the last three months. The committee had conferred with their agent, Capt. Northey, on all points necessary for the future guidance of the company, and would submit his report in explanation thereof. They had only returned from the mines last evening: himself and friends held no less than 1400 of the shares, and so highly did they think of the concern that they wished they were double that number. Mr. Murray and Capt. Northey both held an interest in the mine, and they felt convinced, as far as human observation could go, that they should have a very prosperous mine at an early period. Their object was at once to erect the machinery to enable them to develop the existing capacities of the mine in depth, and crush the ores they had lying on the surface, and to do so without making any call. They had completed the purchase of some land adjoining on most eligible terms. All parties united in the opinion, that by these means they had now a most valuable property, with a complete control over the water-power, instead of the right only to a moiety thereof. To all these arrangements they now asked the shareholders' confirmation.

Mr. SHERMAN (the purser) read the reports, as follows:—

The committee of management of the Great Cowarch Mine have much pleasure in calling the adventurers together, to report the proceedings which have thus far been taken, and the prospects which attend the future workings of the company. The number of shares issued is 5585, of the value of £1,179, with which they have completed the purchase of the mine. Acting under the advice of Mr. Adam Murray, the company's consulting engineer, the committee embraced the opportunity of securing to the company, on favourable terms, a portion of land adjoining the mine, thereby gaining the complete control of a water-power, and considerably increased capacities for the development of the mine. The committee ask the approval of the adventurers to this proceeding, which has, without doubt, greatly augmented the value of the property.

By the cash account here submitted the adventurers will perceive that there is a balance in favour of the mine of £977.19s.

The committee have devoted much time in investigating various plans for the requisite machinery, that at the least cost they might obtain the most efficient working power, adapted according to the most recent scientific improvements. They are happy to report that they have made arrangements which will at an early period place the mine in full operation. The committee having from time to time been advised that the development of the mine may probably be attained with much less capital than was at first anticipated, propose to limit the issue of shares to the actual wants of the mine; it being obvious that an unnecessary amount of capital must have the effect of reducing dividends.

The following report, from Capt. Robert Northey, was then read:—

St. Ives, August 1.—According to your request, I have carefully inspected the above mine, and find at the adit level that there have been intersected several lodes, which produce lead; but my attention was particularly taken by the appearance of Bob's lode, which averages from 3 to 8 feet wide, and is composed of lead, quartz, and flookan, and well-defined walls; and from the appearance of the lead ore on the bank, which was taken from the 10 fathom level when there were no facilities for cleansing the same, it is my opinion that, with perseverance, care, and economy, this sett will eventually, with a small capital, turn out to be one of the most profitable mines in the locality. I am of opinion that 2000t. will be amply sufficient for the expenses of the mine for the year, which will purchase the machinery requisite for hauling and crushing, and for clearing the old mine, and pay the working expenses during that period. I fully agree with Mr. Adam Murray that it is most advisable to obtain the land on the course of the lodes adjoining the present sett, as it will enable us to extend our operations further south, in favour of the mine of 977.19s.

The committee have devoted much time in investigating various plans for the requisite machinery, that at the least cost they might obtain the most efficient working power, adapted according to the most recent scientific improvements. They are happy to report that they have made arrangements which will at an early period place the mine in full operation. The committee having from time to time been advised that the development of the mine may probably be attained with much less capital than was at first anticipated, propose to limit the issue of shares to the actual wants of the mine; it being obvious that an unnecessary amount of capital must have the effect of reducing dividends.

The CHAIRMAN paid a highly flattering compliment to the ability, zeal, and integrity of Capt. Northey, who he stated was, from experience of the strata of Cornwall, Devon, Wales, and the United States, one of the most competent judges of the present day, and he felt assured that he would never put his hand to a report recommending any man to risk a sixpence unless he had the best opinion of the speculation; of course, he could not see 20 fms. through unexplored ground, as some presumptuous theorists professed to do. The opinion of such a practical man was worth more than those of all the theorists in existence. He well understood the length and breadth of Great Cowarch, and declared to the committee that he entertained sanguine expectations, before he had done with it, of proving it was equal to any mine in Wales. The machinery required might be erected for 600t.; it was in hand, and in six weeks the wheel expected to be ready for work. The committee were anxious not to issue more shares than absolutely necessary. They had already registered 5585, which included

those taken by the landlord and others for the purchase of the mine and the adjoining extension of sett lately made. They now proposed an issue of 500 more, a preference to be given proportionately to all the present holders who chose to apply for them. He would propose that the reports and accounts laid before the meeting be received and adopted.

Mr. STEWART seconded the motion, which was carried unanimously.

Mr. BIRD stated that, during his recent visit to the mines, one of the strongest tests of Capt. Northey's opinion of the concern was the refusal of a much larger salary if he would remain in Cornwall; but he preferred returning to Great Cowarch—the mine being a pet of his. He expressed himself certain that its development under his own control would speedily prove it to be one of the first mines in the locality.

The CHAIRMAN signified that they should require the services of two gentlemen as auditors of the company, if the shareholders present would be kind enough to select two who would undertake the duties.

Messrs. Simmitt and Potter being requested, signified their assent, and were accordingly elected unanimously.

The CHAIRMAN concluded by stating that he should have to call the shareholders together again very shortly. In the meantime, early application for the 500 shares, in proportion to their present holding, might be made. The prospectus extended to 12,000 shares, since reduced to 10,000; but that number exceeding all probable amount of capital required, less than half had been issued; and they should only issue such further number as may be expedient.

Mr. BIRD proposed a vote of thanks to the chairman.

Mr. FRY, in seconding it, expressed a wish that Great Cowarch might prove as successful as everything else the chairman connected himself with. All he had undertaken seemed to succeed, and he trusted this would prove equal to the other concerns he was interested in.

The CHAIRMAN returned thanks, assuring the meeting that no exertion on his part should be found wanting to make it so.—The meeting then terminated.

Mining Correspondence.

BRITISH MINES.

ALFRED CONSOLS.—The shaftmen have been preparing the shaft for driving in this level, which is now ready for that purpose. The lode in the 80 fm. east of Field's engine-shaft, is from 5 to 6 ft. wide, worth for copper ore from 60t. to 600t. per fm. The lode in the bottom winze sinking under the 70 fm. east of this shaft, is 7 to 8 ft. wide, worth for copper ore from 70t. to 80t. per fm.—this winze is between the estates of Lally and Nanospurker. The lode in the 60 fm. west of Field's engine-shaft, is about 4 ft. wide, composed of capel, spar, and munde, and a few spots of rich yellow copper ore. All the other parts of the mine are just as last reported. Our copper sampling on the 26th will be on the same quality as last sampled.

APPLEDORO.—I have just visited this mine, and found the engineer busily engaged in erecting the engine. I am pleased to see it getting on so well, and hope it will be ready to commence working to-morrow week, when I shall be happy to see you or any of the adventurers.

BAT HOLES.—The engine-shaft is sunk 9 fms. below the 48, ground not quite so hard. The Wood lode, in the 48 fm., is more than end big, producing occasional stones of ore, but not to value; same level north the lode is improved, and now worth 12 cwt. lead per fm. The lode in the shallow adit end, at California level, is worth 10 cwt. of lead per fm. We do not expect our sampling will be so much as anticipated, as there is a falling off in some of our pitches; but still we expect as much as last month—viz., 45 tons.

BEDFORD UNITED.—There is no alteration in the 115 fm. east of engine-shaft; in this level, east of Andrew's whizze, the lode is 2 ft. wide, producing saving work; west the lode is 3 ft. wide, composed of spar, munde, and ore. In the 103 fm. east the lode is 4 ft. wide, and worth 4 to 5 tons of ore per fm. The lode in Lintern's whizze is 6 ft. wide, worth 15 tons of ore per fm. The lode in the 90 fm. is 2 ft. wide, saving work. We are still driving by the side of the lode in the 90.

BLACK CRAIG.—This mine continues to improve. We shipped about 44 tons on the 21st on the 21st

CARBONA.—We set, on Saturday last, the engine-shaft to sink by six men and three boys, below the 40 fm. level, at 87 per fm.; the lode at present is in a disordered state. The 25 fm. level, west from engine-shaft, is driving by two men and two boys, at 25s. per fm.; the lode in this end is improving. In a fathom or two further west we expect the tin will increase in quantity to some extent. In the back of the 35 fm. level east a rise is going up, by three men and three boys, at 30s. per fm.—this rise will communicate with the 25 fm. level, opening additional tribute ground. The 25 fm. level east is driving by three men and three boys, at 30s. per fm. In the back of the 35 fm. level west three men are sinking a pitch at 19s. in 17.; in the back of the 25 fm. level east four men are working a pitch at 17s., two men at 10s., and two at 12s., in 17.; and in the back of the 15 fm. level, two men at 12s. in 17. We shall set another pitch or two before the week is out. We sold, on Friday last, black tin, 1 ton 14 cwt., 3 qrs. 13 lbs. at 49s. per ton—35s. 8s. 5d. The produce of black tin from the tin-stuff is improving which goes to show an improving value in the lode—a point of considerable importance, as it not only increases the quantity of black tin, but will also materially diminish the returning or dressing charges.

CARVANNALL.—In the bottom of the winze the ore has a decided western dip, and we have commenced sinking the winze and stopping away west, where the orey parts of the lode appear to make separately, with a branch of mundic between; but from the inclination of the orey parts there is every reason to believe that the mundic will soon be entirely cut out.

CASSANDRA ANNE.—I have inspected the new lode cut at this mine; it is a north and south lode, and has been cut in three different places; two shafts are now sinking on the course of it, and I may safely assure you that it is one of the most kindly lodes on the back for making lead I have ever seen this country. It is all 5 ft. wide, and, judging from its bearing north of Holmbush, I have but little doubt that it is the Holmbush lead lode, carrying as it does a similar gossan, and exhibiting the same congenital appearances. The shafts are sinking with all force, and the strata are most promising for lead. In fact, I have but little doubt that we shall shortly cut ore and make returns; but in another month I shall, of course, be able to give you a more decided opinion.

CEFN GWYN.—I have been engaged every day since my return from London in making preparations for renewing the workings of this mine under the new management. The masons are building the wheel-pit, and I expect will complete it in about a fortnight; the miners are busily engaged in cutting ground, and making preparations for the rods and bobs. I have seen and settled with the merchants and others, and have paid up all the liabilities on this mine. The new lease will be ready for 21 years the middle of next week, which shall be immediately sent you.

DEVON AND COURTEENAY.—Since my last report, there is a favourable change in the 60 end; it is spotted with ore throughout, with other favourable indications of a further improvement. The sumpmen in the engine-shaft, and also in Carte's engine-shaft, are getting on well with the sinking. We are getting on as fast as possible with the wheel, flat-rods, bobs, and pitwork for the west end mine; but we are short of carpenters to carry on the work as fast as I could wish. I have set one of the pitchers in the 60 at 5s. 6d. in 17. We got down the bob for Rundie shaft on Aug. 26th.

DEVON CONSOLS NORTH.—Morris's shaft, on the north lode, is now about 12 fms. deep, producing good stones of copper ore, and, from present indications, we may anticipate an improvement as we prosecute the concern. The ground is equally good for sinking, although our water is increasing as we go down. The adit end, towards the shaft, is getting near home, and the lode is much the same as it has been. We expect to hole about the middle of next month.

DOLFRWYNOG.—In the coateaning, I am glad to inform you, the malaclite continues very strong: the stones and the rock are also coming more strongly impregnated with copper. The appearances generally are very promising, and indicate that we are fast approaching a strong rich lode. I should mention to you that we found some fine specimens of native copper. The Fron level continues without any material alteration.

EAST BALLESWIDDEN.—We are sinking the Flat lode engine-shaft by eight men, lode looking well. There is no doubt when this shaft is sunk 10 fms., and the levels extended, we shall raise a good quantity of tin. In the level on the new lode west we have a good branch of tin. In the lode near West Wheal Virgin wheel we have a good lode of tin.

EAST BIRCH TOR.—We have no material alteration in our present working since my last report. We have the same number of men and boys employed. I have dressed up a parcel of tin, which is just fit for sending to the smelting-works.

EAST BORINGDON.—Annie's shaft, down about 18 fms. 3 ft. from the surface. I intend going 9 ft. deeper, if possible, for water, and then cross-cut to the lode. There are still small strings of lead running through the shaft, a sample of which I have had assayed, which produce 15 in 20 for lead, and 79 ozs. of silver to the ton of ore.

EAST CROWNDALE.—The 58, on north lode, east and west, produces good stones of ore, ground hard for driving; the same level, on south lode, improves in character going west. The 47, on north lode, is poor.

EAST SHARP TOR.—There is no change to notice in the ground, at Hitchins's shaft since last report. I hope by the time stated in my last to commence cross-cutting the lode in the 40 fm. level, immediately to the east of shaft.

EAST WHEAL GEORGE.—The lode in the 28 east is 1½ ft. wide, with a large cap on the south, lode composed of mundic and spots of ore; west, it is 3 ft. wide, kindly, but not rich, daily expecting an improvement. The lode in the stopes in the bottom of the 12 is from 3 to 4 ft. wide, worth from 18s. to 20s. per fm.

EAST WHEAL RASHLEIGH.—We have cut through an east and west lode 5 ft. big, as I stated I expected to in my last from the body of water coming from the end, composed of gossan, mundic, and coated copper, underlaying 15 in. in a fathom. The lead lode has much about the same appearance. Some of the ground requires timbering; I have received some of the same for that purpose.

ESGAI'R LLEE.—The rise is 2 fathoms above the deep adit, and we are expecting to hole in the winze every day. The lode in the rise and winze is yielding on an average 1 ton per fm. The lode in the stopes has improved a little. We are proceeding with the sinking of the engine-shaft as well as can be expected, and are getting materials in order to erect a drawing machine.

GREAT BADDERN.—The 51 end is improved in size and quality, but subject to much mudi; the stopes are not producing so much lead. The 40 is poor, but promising; the stopes in the back, west of Buckley's and east of Tweedale's, are producing fairly. The 30 end has good appearances; the stopes in the back, east an' west, of Burgan's, contain a good lode of lead. The 20 end, on the old lode, is less productive; the stopes east and west of Burgan's are looking well. The 20, upon the new lode, is exceedingly encouraging; we have driven upon its course this week 2 fms., and find it maintains its highly productive character. The cross-cut in this level going south has not yet reached the new lode at that point. The adit end is still poor, but a better appearance. The winze sinking below the adit, on the counter lode, is going down in bad and unproductive ground. The tin pitch in the 20 is producing good work. The surface operations are progressing steadily. We sampled on Saturday last upwards of 40 tons of lead ore. We have also a great quantity of excellent mundic ready for the market.

GREAT BRYN CONSOLS.—We are getting on well here; we have commenced to open the shallow adit, and hope to get through it fast—I have got the necessary timber for that purpose. The buildings are getting on as fast as possible. I am glad to say that we have, independent of the five lodes already discovered, samples of which Mr. Lelehan had, when here last week, cut another lode in the deep adit, but I cannot report fully on it at present, as it is not sufficiently opened upon. I intend going underground to-day (August 28), and examine it, when I will send you full particulars. Our prospects far exceed my most sanguine expectations.

GREAT POLGOOTH.—The 96 east is improved, and is worth 5 cwt. of tin per 100 sacks. The appearance of the lode in the 36, at Coade's, we like very much; the leading part is about 2½ ft. wide, and worth 4 cwt. of tin per 100 sacks; it is in fair ground, and we are clearing out to cut the lode in the 45 fm. level. Early next week a bell will be forwarded for a further sale of tin, which we shall deliver to-morrow (Aug. 29).

HEIGNSTON DOWN CONSOLS.—The lode in the 55 east of Dodge's winze, is 7 ft. wide, and will produce 7 tons of ore per fm.; west of winze the lode is 3 ft. wide, yielding 5 to 6 tons of ore per fm. The stopes in the back of the 35 fm. level yield good supplies of copper ore. Hitchins's shaft progresses satisfactorily; the lode is from 2 to 3 ft. wide, good saving work for copper ore.

HOLMBUSH.—The ground in Hitchins's engine-shaft, sinking below the 132 fm. level, is still more favourable than it was when last reported on, through which we are making good progress. The ground in Wall's engine-shaft, sinking below the 100 fm. level, is not quite so favourable as it was last week, having met with a floor of ironstone, which we hope will be the last. The lode in the 132 fm. level south is 11 ft. wide, composed of quartz, prian, flookan, and lead, a very kindly lode indeed, which is likely to turn out as productive as we formerly anticipated and reported on, judging from the nature of the lode in the 120 over it. We hope to communicate the rise over this level to the 120 next week, after which we shall be in a better position to rise lead. The stopes in the back of the 132 will produce 2 tons of copper ore per fm.; the stopes in the bottom of the level will produce 24 tons of ore per fm. The lode in the 132, east of the diagonal shaft, on the north part, will produce 1½ ton of copper ore per fm., in good killas or clay-slate stratum; this looks promising going eastward, and we hope it is entirely under and clear of the ironstone floor, in which the lode is split into many small branches, but it was over our opinion from first to last, if a similar stratum was found below the ironstone as there is above it, those branches will form a junction, and the lode will again be found productive both east and west of the great cross-course, for in such a position, and under such circumstances, being at the foot of a granite hill, it can hardly fail in being found a productive lode; time and perseverance alone will prove it, and we hope we are making the best of both; the rise over this level is communicated to the winze sink below the 120, and we shall lose no time in commencing to sink below the 132 to the 147, and to drive west to unwater the 132, and south towards Hitchins's shaft. Nothing has been done in the 132 east on the flap-jack lode since the last report, being full of stuff, but we propose when the level is cleared of stuff to fix six men there instead of four to make up for lost time, as we term it; this is of importance to reach the shoot of ore we have in the 110, now wrought at 4s. in the 17, as well as to put a rise up for ventilation, and laying the ground properly open for shooting, &c., either on inwork or tribute. The lode in the 110 east is 15 in. wide, producing 14 tons of ore per fm. The lode in the 100 fm. level east is 20 in. wide, composed of mundic, spar, blende, and stones of ore; the lode in the same level, west of Wall's engine-shaft, is 4 ft. wide, with two well-defined walls in the midst of a compact light blue killas country or stratum, and is composed of mundic, blende, spar, and stones of copper ore, and we hope when Wall's shaft is sunk to the 130 fm. level, and a cross-cut extended south to intersect it, we shall not be disappointed in our expectations of meeting with a course of ore. We will only add that we are very busy in preparing both copper and lead ores for sale as quick as possible.

KIRKCUDBRIGHTSHIRE.—Lode in the 86, west of Stewart's, large and kindly, spotted with lead. In the 74 west men are put to rise in order to open a passage to the 62 for ventilation; in the 74, east of Gilpin's, the lode is 4 ft. wide, very favourable for ore; in the 74 west the lode is very soft, and yielding 6 cwt. of lead per fm.; the men have to rise here also to ventilate the level. In the 62 west the lode is favourable for breaking, and yields 8 cwt. of lead per fm. In the 50 west a very kindly lode, yielding 7 cwt. of lead per fm. We have shipped a cargo of lead ore (70 tons) on board the *Mary*, for the Holywell market.

LAMHEROOE WHEAL MARIA.—We have fixed both the bobs—one at Jessie's shaft, and the other at the engine-shaft. The travelling bob will be put in its place this day (Tuesday); then we shall commence fixing the surface rods, which I calculate upon completing, and putting to work to draw the water in Jessie's shaft, about the latter part of next week; the water will be pumped out of the shaft in 12 hours after the rods are put to work. The sumpmen continue to drive 6 feet in the 60 fm. level, east, as the rods are put to work. I regret to find that the tin-stuff is turning out coarse; however, I entertain a hope that we shall raise arsenic enough to pay the dressing cost. We shall have 1 ton of tin ready for the market this week, and the second ton of tin will be ready by the middle of next month. We have two smiths, two men sticking, and two

carpenters at work as brisk as possible upon the surface rods. We have six men employed raising the work at the Orchard shaft; though the work is coarse at present, we have a chance of making better discoveries.

LEWIS.—The north lode, in the 80 fathom level east from the tin shaft, is divided into two branches, and in disordered ground; from the run of tin ground in the level above, we may expect a speedy improvement. Praed's lode, in the 40 west from copper ore shaft, is 1 ft. wide, good work for tin. In the 30 it is 18 in. wide, opening good tribute ground. In the 20, east from Stansby's shaft, it is 10 in. wide, producing stones of tin; in the 20, east from Gundry's shaft, it is 15 in. wide, disordered by a flookan. In the 10 fm. level, east from Gundry's shaft, it is 8 in. wide, opening tribute ground. In the eastern part of the sett and south ground we are using every exertion in clearing the adit levels and driving on some of the lodes, which have very kindly appearances. In other respects there is no alterations since my last report.

LYDFORD CONSOLS.—At Wheal Mary, the lode in the adit level, south of the gossan shaft, is 2 ft. wide, being composed of quartz, mundic, spots of lead, and copper ore—a very kindly lode. We shall, I hope, commence driving on the Fanny lode the latter end of this week. At Wheal Adventure, the lode in the adit level south is large and kindly, being composed of gossan, flookan, and spots of mundic—a kindly lode. We have driven west from the adit level about 2 fms. on an east and west branch, of a kindly nature, composed of gossan and mundic. We have all the arms of the wheel in and one of the rings on, and are now proceeding with this part of the work by a force of four carpenters, who it is hoped will not be long in finishing it. We have received some parts of the pitwork, and are expecting more the latter end of this week. Our leases are nearly finished.

MELIN-LYNN-PAIR (SILVER-LEAD).—This mine was formerly worked by the old men to a depth of 30 fms. from the surface, where an engine-shaft has been sunk, and intersected the lode at this depth. It appears that this mine was suspended about 110 years ago, in consequence of a dispute which took place between the adventurers, and the mine was abandoned from that time, leaving several wooden pumps, with rods and tools remaining in the mine, which, by the aid of a horse-whim, has been now drawn to the surface. The lode is running nearly east and west, and underlays north about 1 ft. per fathom. Different levels have been extended from 30 to 40 fathoms in length; its average size is from 6 to 8 ft. wide, and about one-half of the breadth has been worked away by the old men, which appears to have been at that time the softest and most productive part; but not having any crusher, or such convenience as at the present time, they left the harder part of the lode standing for the workings above mentioned, which is about 4 ft. wide, containing good branches of ore in many places, and, on an average, will yield from 15 to 20 cwt. of ore per fathom. From the accounts that have been handed down from time to time, the lode in the old bottoms is large, and very rich in silver-lead ore, which the shareholders expect to see in the course of a few days. Several tons of ore have been taken from the old men's workings since the water has been drawn out, and there is a great quantity now on the surface prepared for the crusher. There is a full supply of surface water throughout the year, running immediately through the mine, to work any machinery that would be wanted. There is also a good turnpike road running through the centre of the sett, which leads to the shipping port of Aberdovey, a distance of 3½ miles, where timber and iron, and everything requisite for working the mine, may be had to any extent, and are shipped to any part of the kingdom.

MERLLYN.—The lode in the whim-shaft below the 26 fathom level is 1 ft. wide, producing about 1 ton of lead ore per fm.; the lode in the boundary winze is small, but producing good stones of lead; the lode in the 26 fm. level, west of the whim-shaft, is 1 ft. wide, producing about 1 ton per fathom. The 16 fm. level west from the whim-shaft, is communicated with the 16 fathom level of the engine-shaft; since which a winze has been commenced sinking in the bottom of this level, in order to ventilate the 26 fm. level; the lode is producing about 1 ton per fm.; the lode in the 16 fathom level, west of the engine-shaft, is rather disordered, producing about 2 tons per fathom. The lode in the 15 fm. level is intersected by another cross-course; it is at present poor, but having a good lode close on the cross-course, I expect it will improve again shortly.

NORTH BASSET.—The new shaft is now down to the 82 fm. level, and we have commenced driving on the course of the lode; the lode in the bottom of the shaft is 4 ft. wide, a good lode of yellow ore, in the 82 fm. level, west of the new shaft, we have cut a solid course of yellow ore, 6 ft. wide. In the 72 fm. level, the lode is 2 ft. wide, grey and black ore; this level is now getting into the course of ore gone down in the bottom of the 62 fm. level, where we have a pitch working at 1s. 9d. in 17. tribute. In the 72 fm. level, east of the new shaft, the lode is 3 ft. wide, a good lode of yellow ore. In the 62 fm. level, the lode is 2 ft. wide, a beautiful gossan, mixed with grey and black ore. From our setting this month you will perceive we have 15 tributaries at work, varying from 1s. to 3s. in 17., and 45 varying from 3s. upwards. We have 77 tunnermen engaged in driving and cutting, at an average of 8s. per fathom. The tribute pitches are all looking well, and the prospects of the mine never looked so cheery as at present.

NORTH WHEAL ROBERT.—Since my last report, we have sunk Murdoch's engine-shaft 4 ft. (3 fms. before reported), making 3 fm. 4 ft. for the month. We set, August 15th, 10 fms. certain, at 10s. 10s. per fm., to six shaftmen and three labourers; the men are working well, and the shaft is sinking very expeditiously. In our adit level we have driven 2 fms. 2 ft. 10 in. (5 fms. before reported), making 7 fms. 2 ft. 10 in. for the month, at 3s. 10s. per fm. We set, Aug. 15, 9 fms., at 3s. 8s. per fm.; the lode is 6 ft. wide, and looking better than I have seen it for some time, and I think we shall have a change shortly. In our cross-course we have driven 4 ft. (3 fms. before reported), making 3 fm. 4 ft. for the month.

PENHAUGER.—We are now erecting a horse-whim, after which we shall resume the sinking of the engine-shaft.

PENZANCE CONSOLS.—The following report has been received from Capt. Peter Foy, of the Tin-roof Mines:—The sett is situated in a stratum of decomposed granite, and has traversing it two east and west ledges, about 9 fms. apart, connected with innumerable veins of mineral varying from 1 in. to 12 in. in width, all in a congenital channel of ground, and containing more or less tin. The present operations on the great lode have been confined to sinking Carte's shaft to the 24 fm. level, and extending the same level 13 fms. east and 30 fms. west, through ground that will work at about 8s. in 17.; sinking the engine-shaft to the 29 fm. level, and extending the latter 4 fms. east and 40 fms. west, laying open ground that can be wrought at from 1s. to 11s. in 17.; the ground between these ledges has been cut through at several points, by means of driving on the small branches already alluded to, and the south lode (a good tinny one) met with in these operations. On all these ledges the ground is inexpensive for opening, the cost of driving being from 2s. 10s. to 3s. per fm. I consider this set a very fair speculation, and from the extent of the old men's workings, and those of the present adventurers, I am of opinion that more vigorous and extended operations are demanded, and should, therefore, urge the cutting down and putting in order Carte's shaft, erecting thereon a pumping engine of from 25 to 30 in. cylinder, the erection of a stamping engine, capable of driving from 12 to 16 heads, and the conversion of the present engine to a whim-engine; these works can be completed for about 3000/-, and I am fully persuaded that they are essentially necessary for the fair development of this extensive and promising seat. What has been done I consider satisfactory, and I have no doubt if the above propositions are acted on, and the mine carried out with spirit, all that is profitable concern will be the result.

PETER TAVY AND MARY TAVY.—The 43 fm. level is driven 4 ft. east of shaft; the leader is still 7 in. wide, good work; the lode altogether in the 43 fm. level west is 4 ft. wide, yielding fair work; on the north part, driven 6 ft. from shaft, the lode in each end is presenting a good appearance. Respecting the machinery, we are progressing favourably with the stamps, &c.

RIX HILL.—The end east in the 50 is still poor. No lode taken down in the shaft. Tregaskins' pitch looks well. The rise in the back of the 17 fm. level west produces good tin work.

RUNNAFORD COOMBE.—The lode in the stopes is as good as when I wrote last, and the men are breaking excellent work for the stamps.

SILVER VALLEY AND WHEAL BROTHERS.—Our anticipations of meeting with a considerable quantity of rich silver ore, which we last reported, have been fully realised. This last week we have been rising and stopping in the back of our level to the 120 next week, after which we shall be in a better position to rise lead.

The stopes in the back of the 132 will produce 2 tons of copper ore per fm.; the stopes in the bottom of the level will produce 24 tons of ore per fm. The lode in the 132, east of the diagonal shaft, on the north part, will produce 1½ ton of copper ore per fm., in good killas or clay-slate stratum; this looks promising going eastward, and we hope it is entirely under and clear of the ironstone floor, in which the lode is split into many small branches, but it was over our opinion from first to last, if a similar stratum was found below the ironstone as there is above it, those branches will form a junction, and the lode will again be found productive both east and west of the great cross-course, for in such a position, and under such circumstances, being at the foot of a granite hill, it can hardly fail in being found a productive lode; time and perseverance alone will prove it, and we hope we are making the best of both; the rise over this level is communicated to the winze sink below the 120, and we shall lose no time in commencing to sink below the 132 to the 147, and to drive west to unwater the 132, and south towards Hitchins's shaft. Nothing has been done in the 132 east on the flap-jack lode since the last report, being full of stuff, but we propose when the level is cleared of stuff to fix six men there instead of four to make up for lost time, as we term it; this is of importance to reach the shoot of ore we have

last century to the 30 fm. level, and proved productive. The cause of its abandonment is said to have been a dispute. The lode, from 6 to 8 feet wide, runs east and west, underlaying north about 1 ft. per fathom. A turnpike-road passes through the sett, leading to the shipping port, which is only 3½ miles distant. [The report is among our Mining Correspondence.]

At the two-monthly meeting of Wheal Crebor adventurers, held yesterday, the accounts, which showed a balance of 211. 9s. 5d. in favour of the mine, were passed. A call of 10s. per share was made. The steam-engine will be set to work on the 20th of next month, and in a fortnight from that date the water will be off to the 12 fm. level under adit, and the driving of the same commenced. There are about 15 fms. to drive to reach the cross-course which produced so favourable a change above, which will occupy about three months. Capt. J. Richards (chief agent at the Devon Great Consols, and also monthly inspector at Wheal Crebor), says in his report, "I consider, judging from the kindly nature of the lode in the adit, or 54 fm. level, to the west of the cross-course, the fine character of the cross-course itself, and the congenial nature of the country, that a productive lode may be fairly calculated on, both at this and deeper levels."

At the Hennock quarterly meeting, on Monday (Alfred Wilson, Esq., in the chair), the accounts showed—By cash, to May 6, 27251. 5s.; ditto to the 23d of August, 551. 8s.—32761. 13s.—Mine cost, &c., to May 6, 25831. 4s. 11s.; ditto to 23d August, 2691. 18s. 3d.; leaving balance in hand, 4231. 9s. 10d.—The assets are: Balance in hand, 4231. 9s. 10d.; arrears, 23. 2s.; call made this day, 2251. 6711. 11s. 10d.—The liabilities: Merchants' bills, 2171. 1s. 4d.; cost for three months, say 300.; leaving balance in favour of mine, 1541. 10s. 6d. A call of 3s. per share was made, and 65 shares were forfeited for non payment of calls, with the option of being redeemed by a payment of a fine of 5s. per share within 14 days. Lieut. Col. Harding, Chester Cheston, Esq., and Mr. W. Channing, were elected directors in the room of Messrs. Forsyth, Taperell, and Winterbottom. A beautiful sample of the ore taken at 60 fms., from the same lode as Wheal Exmouth (the adjoining mine), was exhibited, together with a specimen from Hennock at the 30, showing a similarity of character in the nature of the ground, rendering it probable that the same results may accrue at the further depth of 20 fms. During the quarter only 5 ft. has been sunk, owing to water in the shaft. In a few weeks they hope to have top water enough to enable them to sink on till May month, and see the lode 20 fms. below, where the prospects may prove so cheering as to induce adventurers to erect a small steam-engine, and always work effectually.

At East Tywarnhayle meeting, on the 21st inst., the accounts for March, April, May, and June, showed—Balance from last account, 3531. 16s. 8d.; costs and merchants' bills, 6261. 13s. = 9801. 9s. 8d.—By call in May, 7681. leaving balance against adventurers, 2121. 9s. 8d. The balance, being 16s. 8d. per share, was divided amongst the adventurers. A special meeting is to be held on the 11th Sept., to take into consideration the propriety of further prosecuting the workings, or of abandoning the mine.

At Calvadnock meeting, on the 22d inst., the accounts for four months, ending June, showed—Balance from last account, 2211. 5s. 11d.; costs and merchants' bills, 7201. 4s. 5d. = 9411. 10s. 4d.—By tin sold, 711. 2s. 4d.; call in April, 5001. leaving balance against adventurers, 3701. 8s.—A call of 12. per share was made.

At Cook's Kitchen meeting, on the 20th inst., the accounts showed—Balance from last account, 101. 5s. 10d.; cost and merchants' bills, 1914. 2s. = 1924. 7s. 10d.—By ores sold, 14891. 4s.; leaving balance against adventurers, 4351. 3s. 10d.

At Boscombe Mine meeting, on the 22d inst., the accounts for four months ending May showed—Balance last account, 5001.; labour cost for Feb., 1751. 11s. 4d.; March ditto, 1691. 18s. 10d.; April, 1791. 18s. 10d.; May, 2651. 13s. 1d.; merchants' bills, &c., 3451. 14s. 1d.; lord's dues, 241. 5s. 4d.; sundries, 271. 17s. 6d. = 16881. 19s.—By call, 6001.; tin sold, 5411. 19s. 7d.; leaving balance against the adventurers, 5461. 19s. 5d. A call of 21. 10s. per share was made. The engine-shaft at Golding's is 52 fathoms under adit; the end west is 8 fms., in tin ground. The 40 is extended 61 fms. west, 53 of which in good tin ground; the lode in the end is worth 12d. to 15d. per fm., and promises well for the level coming in under, and in a few fathoms more it is expected it will be cut in the level over: 77 men and boys are at work at the mine, where they have a large run of unexplored ground in whole almost to surface.

There is a considerable demand for shares in East Boringdon Mine at advanced prices; there are also enquiries for Boringdon Park and East Russell, in all of which business has been done. From East Russell some good ore work can be seen at the office.

From Great Bryn Mines, near Bodmin, Cornwall, as premised last week, Mr. Leete has just returned with samples of the ore broken by himself and Capt. Webb, and they are at his office in Crosby Hall Chambers for inspection. Several agents of mines, assayers, and smelters, now in town, have availed themselves of the opportunity of examining them, and as the quality speaks for itself, both in copper and tin, all who feel an interest may avail themselves of the same opportunity. There are five champion lodes in the sett, between two large elvan courses, crossed also by a slide. The lodes underlie north, and the dues are 1-18th, held under a lease for 21 years unexpired. The reports from Capt. John Kernick and Joseph Warrick are of the most favourable description.

At Tywarnhayle Mines, the 100 east is producing 1½ ton of copper ore per fathom; Bennett's shaft yields 5 tons; 90 east 1½ ton; the 60 east, on Taylor's lode, 3 tons per fm. The sampling is 305 tons. The new shaft at Wheal Clarence is holed to adit, from whence ends are driving, yielding an average of 5 cwt. of lead per fm. The adit south is yielding 3 tons of lead ore per fm.; the 16 fm. level 1 ton of copper ore, and a small portion of tin. The next lead sale is expected to be double the last.

At West Towan, at Caroline's shaft, below the 15, there is a rich branch of tin; being small, a cross-cut is driving south, to prove if any lode is standing. There is good tinny ground east of the shaft in the 30, and in other parts of the mine, where they daily expect to cut a good lode.

At Wheal Precious the cross-cut from Taylor's shaft, in the 19 fathom level, has intersected a south underlayer, 1 ft. wide, composed of jack, mundic, and spar, letting out much water, and good spots of ore; a branch about 6 in. wide will fall into the lode about 3 ft. further west. This concern looks highly promising.

At Wheal Plomer, to the west of Tywarnhayle, there has been discovered a lead lode, yielding stones of lead 14 lbs. each in an old adit level, that has not been worked for many years. The prospects at Wheal Clarence may have the effect to encourage a trial being made upon it with some good result.

The London directors of the Boscombe Tin Mine visited the sett on the 15th inst., when D. Halket, Esq. (the chairman), Messrs. W. Mitchell, G. Carne, E. Varnish, J. Sheldon, E. Colemen, and W. Mitchell, jun., were met by Messrs. J. Bennett, T. Carthew, P. Grenfell, W. Angwin, N. C. Daniel, W. Williams, N. Holman, J. Carthew, and several others from St. Just, and other practical agents, with whom they carefully examined the merits of the sett, and the extensive operations which have been carried on. The engine-house, though only commenced about the middle part of June, had been completely finished, and the engine being in its place went to work, giving great satisfaction to the surrounding spectators. The party adjourned to the account-house, where an excellent dinner was provided; and the chairman, after the usual toasts, proposed the health of the lords—Messrs. W. Angwin, J. Bennett, and P. Grenfell; who, in responding, said they would give up their dues for the benefit of the mine for one year. The event was one highly gratifying to all who participated, from the lords to the working miner.

By the Silver Valley and Wheal Brothers report, received yesterday, it appears that the important discovery of rich grey oxide of silver in the 24 fm. level, at Oak shaft, noticed in our last, still holds equally rich; and in the 35 fm. level the lode has much improved, as anticipated. An assay from an ore branch in the lode just cut gives 137 ozs. fine silver per ton.

At Wheal Williams some good work has been broken, a box of which has been sent to London. It is considered very like that found at Great Wheal Maria, it being from the south lode of that mine.

At East Wheal Leisure they expect to cut the lode in the 38 south in about a fortnight; the ground is impregnated with branches of yellow ore. In the 17 west the lode is 4 ft. wide, yielding half-a-ton per fm., and looking very promising. The 10 west, on Taylor's lode, is 3 ft. wide, turning out from 1½ to 2 tons per fm.; the winze below, and the level east, 1 ton each per fathom, and the sampling on the 9th Sept. is estimated to be full 100 tons, and the mine generally progressing most favourably.

We have already pointed out the advantages which are presented to the capitalist by the Brinck Goch Slate and Slab Quarry Company. Appended to the advertisement, in another column, is a return from the agent of the make for May, June, and July, showing a total of 53,400 slates, amounting to 115 tons, independent of a quantity of slabs: this removes from the undertaking all merely speculative character, and places it among the most

bona fide of the day, from which a good return may be fairly anticipated for the capital embarked. This (Saturday) is the last day on which applications for shares can be received.

We are glad at all times to report the progress of mining adventure in Ireland, satisfied, as we have always expressed ourselves, that the capitalist and the country must be mutually benefited by the money thus embarked. The Crookhaven Mines, in the county of Cork, have recently been taken up by a highly respectable party in London, with the *bona fide* intention of proving and working the known rich lodes of the district. A considerable capital was expended upon this property in 1846-7; two shafts were sunk, one 10 fms. the other 30 fms., and a level driven upon the course of one of the lodes, which produced some fine stones of copper, and when assayed yielded about 60 per cent. of copper, and 60 to 70 ozs. of silver to the ton. Operations were stopped at this period for want of capital and the necessary machinery for prosecuting the undertaking. Within the last few days the 10 fm. shaft has been unwatered, and some rich stones of ore have been stoned from the 7 fm. level, which serves to fairly test the accuracy of former reports. Ten lodes have been discovered upon the sett, and it is proposed to sink another engine-shaft in a more central part to prove the whole of these lodes, and from the indications at surface and in the cliffs the prospects are cheering and highly promising. As these operations will involve the expenditure of about 5000l., it is a most fortunate circumstance for the poverty-stricken inhabitants of the neighbourhood, and it is hoped will induce others to embark in similar undertakings, as there is no doubt but many rich veins traverse this district, of a highly mineralized character.

During the week, share have changed hands in Devon Great Consols, Devon and Courtenay, Wheal Arthur, Calstock, Carvannal, Merlyn, Wheal Basset, West Caradon, West Providence, Alfred Consols, Mary Ann, South Tamar, Heignston Down, Wheal Buller, New East Crowndale, East Gunnar Lake, Silver Valley, Trebelle, Bedford United, Wheal Owles, Wicklow, East Russell, Great Bryn, Crebor, Treviseley, Tremayne, Cilgai and Wentworth, Wheal Langford, Wheal Zion, Wheal Venton, Wheal Lemon, Penzance Consols, Boringdon Park, North Buller, North Fowey, Wheal Dora, Wheal Tom, Wheal Harriott, Wheal Russell, Wheal Trelawny, East Boringdon Park, Wheal Williams, and North Robert.

In Foreign mines, transactions have been done in St. John del Rey, Cobre, Santiago, and Worthing.

The Royal Santiago Mining Company have advices to the 19th of July. The water continues to rise, and is 1 ft. deep in the 22 fathom level west, which is likely to retard the workings there. Taylor's shaft has been drained and sinking resumed. The stopes west look well, yielding 8 tons per fm., and the ore enlarging in the bottom of the level, which augurs favourably for the next sink.

From the Linares Mines advices have been received to the 15th. The 55, west of Wilson's, yields 3 tons per fm.; a pitch under 10 tons; another from

5 to 6 tons per fm. A pitch under the 45, east of Shaw's, yields 10 tons per fathom; other pitches turning out tolerably well. The ore raised, 43 tons; in stock, 734 tons 3 cwt. Pig-lead smelted, 24½ tons; in stock, 270 tons 15 cwt.

The brother of our correspondent, Mr. C. S. Richardson, who went from Cornwall to South Australia, in writing to his friends at home, gives a most flattering account of the general prospects of the colony. Labour is very plentiful, and there is a great demand for masons, smiths, carpenters, engineers, millwrights, wheelwrights, shepherds, and particularly for good useful labourers. Provisions are very cheap, the climate healthy, and a man with prudence and economy may save enough in a few years to live in easy circumstances in his old age. From another source, we learn that "in almost all the mines the want of capital is felt, parties often giving a high premium for shares who by no means like to launch out money to work the mines, and hence the results which attend one-half that are started; they are either stopped for want of funds, or merely worked to 'pick the eyes out.'" Colonial speculators have not the patience to follow anything out fully: it must be done immediately or in a hurry, otherwise the matter is abandoned; and here I might as well state that no importation of Cornish miners would be too great. Labouring miners are much wanted, and would meet with instant employment and liberal wages, and from 6 to 10 experienced mining captains would get immediate situations from 3l. 3s. to 4l. 4s. per week. Since I last wrote, I have been into the interior to visit and report on different mines, and my opinion has in more than one instance been of practical use. I have had to oppose a system pursued by agents, calling themselves Cornish captains, and the results have proved that I was in the right. In reality, there is a great amount of ignorance in mining matters amongst most of those at present engaged in them."

Recent advices from Sydney, New South Wales, represent mining pursuits as being likely to attract a larger share of the capital of the country than heretofore. The only mining establishments at present at work are those of the Australian Agricultural Company, at and near Newcastle, and that of Messrs. Donaldson, at Burwood; but coal works are about to be commenced by Mr. Brown, at the Glebe, which will form another source of supply. The greatest quantity is, of course, raised by the Australian Agricultural Company: the sales last year amounted to 46,000 tons, value about 16,000l., the price being 6s. 6d. per ton (raised in 1847 to 7s.). The produce of Burwood estate during the same period was returned by the Messrs. Donaldson at 6602 tons, value (at 7s. per ton) about 2310l. Burwood coal is in good repute, especially for steam purposes; but for such use the Morpeth coal is even yet more esteemed, being less apt to run to clinker.

The silver mine recently discovered near Brixlegg, in the valley of the Lower Inn, Germany, has not realised the hopes that were originally entertained respecting it. All that can be said of the works as yet is, that they yield a moderate profit after covering the expenses. It is, however, hoped that, as the shafts proceed in depth, the results will be more favourable than they have been hitherto.

A valuable discovery has just been made at the Austrian gold mines at Nagyegyed, in Transylvania, and one which will, for many months at least, in the opinion of competent judges, not fail to prove extremely productive. A large vein of gold has been opened up, which is looked upon as peculiarly rich for these mines, inasmuch as the matrix contains, on an average, very nearly ½ per cent. of gold.

At Fünfkirchen, in Hungary, a very abundant deposit of coal has recently been discovered, so abundant, indeed, that it is not inferior in extent to any coal deposit in the whole Austrian empire.

Mr. Henry Scale, of Briton-ferry Works, has passed his examinations at the Bristol Court of Bankruptcy, and obtained a certificate of the second class—the Commissioner having testified approval of his conduct generally. Mr. Scale is well known in the iron trade, and was formerly partner with Mr. Alderman Thompson.

CHYRASE CONSOLS.—On Tuesday last the village of Summercourt, and the town of St. Endor were enlivened by a great many strangers, on account of the setting to work of a new large engine on the above mine, from the foundry of Messrs. Hodge of St. Austell. Should the qualities of the engine prove as good as its external appearance, it will indeed be a good one, for never was a more highly-finished engine sent out from any foundry in the country; and on the occasion, and to drink success to the mine, a party of nearly 20 gentlemen sat down to an excellent dinner in the large room at the Fair Park House, the chair being taken by Mr. N. F. Bassett, supported by the Rev. S. M. Walker, the worthy vicar, and Mr. D. Martyn, of St. Columb; the vice being the representative of the company, Mr. T. Parish, of Birmingham. The day was Prince Albert's birth-day, and never was a toast more joyfully given or more cordially responded to. Success to the mine was also drunk most enthusiastically, with numerous other toasts, and the day went off, as did the engine, to the gratification and satisfaction of all. A party to the number of 87, consisting of the assistant engineers, masons, carpenters, and labourers, had an excellent dinner provided for them at the church-town on the occasion, when they spent a most happy day, and in copious libations success was again drunk to the mine of Chyrase.

ROYAL EXCHANGE BELLS.—Messrs. John Taylor and Son, of Loughborough have contracted for re-casting the bells for the clock at the Royal Exchange. They are 15 in number; the largest is the note C, and will weigh about 30 cwt., though the present one is much heavier. By the agreement, they are to be completed within eight months from the 31st July.

BLACK TIN

Sold at Chardown, on the 21st of August.

Mine.	Tons c. gr. lbs.	Price p. Ton.	Amount.	Purchasers.
Boscombe	1 5 0 9	£32 5 0	£65 10 0	Bolitho & Sons.
<i>Sold at St. Agnes, on the 23d August.</i>				
Potternewton	25	£47 0 0	£51 0 0	Bissou Company.
ditto	4	51 0 0	51 0 0	ditto.
ditto	40	12 6	480 0	Calenck Company.
Rix Hill	12	52 15 0	52 15 0	Calenck & Williams.

LEAD ORES.

Ticketings at the King's Head Hotel, Holywell, August 28.

Mines.	Tons	Price p. ton.	Purchasers.
Pant-y-mwyn	25	£10 0 0	Walker, Parker, & Co.
Pen-yr-hembas	65	10 14 6	ditto.
Westminster	65	10 16 6	J. P. Eytan.
Ditto	60	10 14 6	Walker, Parker, & Co.
Jamaica	30	8 5 6	Newton, Keates, & Co.
Maenysafn	60	10 14 0	Walker, Parker, & Co.
Ditto	60	10 12 6	ditto.
Milwr	20	11 0 6	Newton, Keates, & Co.
Halkin Hall	6	10 6 6	J. P. Eytan.
Pantyfrith	20	10 15 0	Newton, Keates, & Co.
Ditto round	10	13 13 0	Walker, Parker, & Co.
Cast Conway	34	12 10 0	ditto.
Machynlleth	20	10 17 0	Mather and Co.
Ditto	11	9 0 0	ditto.
Dyffrynwg	12	10 1 0	ditto.
Cairnsmore	40	9 15 0	ditto.

VAUXHALL—SHILLING NIGHTS—EVERY EVENING
—The Director refers with the greatest satisfaction to the success attendant on the **REDUCTION OF THE PRICE OF ADMISSION**, which he was induced to make in order to meet the wishes of the many thousand visitors from the Provinces and the Continent, who were desirous of visiting this Royal and world-famous Establishment. The Entertainments are continued in all their brilliant variety, the services of all the Eminent Artists have been retained, and no diminution whatever has been made in any of the manifold departments, in proof of which the two Greatest Equestrians in the World, Hernández and Mállo, Palmyra Anna will appear every evening, together with Mr. A. Nelson, the Pine-stick Harmonist—Signor Zanesco and his Sons—Arban's Great Band—Concert and Ball—Madame Antonio's Terrific Rope Ascension—Foucault's Fire and Water Sports—Signor Bradbury's Feats on the Slack Rope—Brilliant Illuminations—Gorgeous Fireworks, &c., &c. **ADMISSION ONE SHILLING.** ON WEDNESDAY, THE GREAT **BALLOON RACE** by Celebrated Aeronauts. Doors open at Seven on ordinary nights. Fireworks at Eleven. Open every evening including Saturday. Admission 1s. 4d.

NOTICES TO CORRESPONDENTS.

THE COST-BOOK SYSTEM.—Sir: As an authority in mining matters, I should be glad of your advice or opinion in the following case:—A company is formed to work a mine in all the shareholders but one subscribe the cost-book; this one with the rest pays the calls, but defers signing the book; and at a second general meeting absolutely refuses to do so, and at this meeting is elected on the committee of management—his appointment legal; and, if not, can his shares and calls thereon be declared forfeit? A notice of this in your next publication will oblige.—B. W. Liverpool, Aug. 28.

Note: Our correspondent's case is a very peculiar one, and more a question for a legal opinion than we are prepared to answer. The Vice-Warden requires proof by the cost-book, or other legal document, that an individual has committed some act that makes him liable for wages and supplies rendered to the mine. We consider that if the name stands upon the cost-book, and the party pays his money and attends the meetings, this would be sufficient proof of liability. Should his act in the capacity of one of the committee, this would suffice. If he neglects to pay the calls, the forfeiture of his shares, of course, is provided for (or should be) by the resolutions in the book, or terms of the prospectus. Some of our correspondents may favour us with their views on these points.

Sir:—A subject has lately been discussed between the agents of the grantors and the grantees of mine sets, as to the propriety of introducing a retiring clause in the event of a mine becoming poor, and it has been intimated that attempts have lately been made to enforce the working of a mine during the whole term granted, although it was evident it could only be done at a serious further loss to the adventurers. It occurs to me, that it could only, if attempted, become a subject for nominal damages; but I should feel obliged if any of your correspondents would favour us with the law of the case, citing any causes which may have reference thereto.—P. City, Aug. 26.

"A Mine Surveyor" (Scotland).—A good paste made of pure wheat flour is the best adhesive substance for mounting drawings, maps, &c. The canvas should be stretched dry, the paper then uniformly covered with paste by a soft brush, folded together, and left for one or two minutes to soak; it may then be opened, laid on the canvas, and spread with the hands to the greatest possible extent, taking care not to tear it. If properly treated, it will be found to dry perfectly smooth and tight. It requires some practice. For an answer to the second question, we must refer our correspondent to Murchison's "Plattner on the Blow-pipe," and Mitchell's "Manual of Practical Assaying." The pieces published are for merchantable pig and sheet lead, which having been through the smelters' hands, contain no appreciable quantity of silver, as they are careful to get out all which will pay for extracting. A parcel of lead accidentally found to contain an unusually large proportion of silver would undoubtedly obtain more than the market price for lead, and would be purchased for remelting and desilvering.

"A Miner" (Buckland).—We deprecate "puffing" as much as our correspondent can: but we believe, in the present case, there is some ground for the statements put forth. We should be glad if "A Miner" would favour us occasionally with a few "facts" as to mining matters in his neighbourhood. If such course were followed by our correspondents in the different districts, much that is now deemed objectionable would be superseded by direct and authentic information.

"Geologicus" (Matlock).—The great land slip at Lyme Regis took place on the night of Christmas Day, 1839. The chasm averaged 300 ft. in breadth and 150 ft. in depth; and the beach, a quarter of a mile in length, was raised 50 ft. above its former level, completely altering the character of the coast.

The letter of "One Interested" (Tower-hill) can only appear as an advertisement. **"W. H. H."** (Brunswick-square).—We do not see that acting on our correspondent's suggestion would lead to any good result. Few mines pay continuously regular dividends, and those are known in the mining world. We give in our dividend list the date of the last dividend, and a very little enquiry will elicit further information.

Mar Brook Sough, Derbyshire.—Sir: Some parties connected with me are interested in this speculation: its object was to drain the water from a number of mines, by means of one level—the parties paying a royalty. I should be much obliged to any one who would state what are the prospects of the company, and if the shares are marketable.—G. A. : Darlaston, Aug. 22.

"G. A."—The address of the gentleman referred to is at Bude, Cornwall.

"L." (Madrid).—We are greatly obliged for the particulars forwarded, which are embodied in our present Journal, and shall feel thankful for a continuation of such interesting information. The amount received has been 132. per share for some time, not 122.: the 22,417 came from the secretary—the small difference may be errors on calls.

"An Adventurer" (York).—The fault of the omission is not with us: enquiry should be made at the office, why they are not forwarded to our office. We always insert reports, and other particulars of interest to the shareholders, gratuitously.

Mr. Braithwaite Poole's "Statistics of the Coal Trade" appeared in the Journal of the 12th July last.

The letter of "An Adventurer in the Abergwesin Mines" shall not be lost sight of. We do not know at present what has become of the party referred to; or in what condition, or whose hands, the property is now in.

Captain A. had better communicate with the parties referred to, when, doubtless, an explanation will be entered into which will set matters right.

"E. S." (Cornhill).—The property of the German Mining Company was situated in the Duchy of Nassau: copper was smelted there, but the expense of labour and fuel was such that it could not be done to a profit.

"B. E." (Birmingham).—The Modum Cobalt Works were several times unsuccessfully offered for sale; subsequently they were bought by Messrs. Goodhail and Reeves, of London, who were the largest mortgagors.

"C. G." (Zamora).—In assaying tin, the common method is to take two ounces of black tin, culm one-third the weight of sample, and 4 dwt. of borax. When the ore contains a large proportion of iron, more culm is to be added. When the sample is properly down, or flowered, the surface of the assay in the crucible will be perfectly smooth and motionless; in a strong heat this will occur in about 12 minutes. When taken out of the fire it must be stirred well with an iron rod before you pour it; the crucible must then be scraped, the scrapings pulverised, and warmed on a shovel. The lump should be malleable, and bend to the hammer without breaking. Grain can be treated in the same manner, the addition of culm will not, however, be required. In instances where the sample is very stubborn, a small quantity of fluor-spar may be added.

"F. B." (York-crescent).—Mr. Drayton's patent for silvering glass was taken out in November, 1843.

"Antiquarian" (Camberwell).—According to Matthew Paris, who died 1259, tin was discovered in Germany by a Cornishman, who fled there on account of a murder, in the year 1241. He further adds that the Germans furnished this metal at so cheap a rate that they could sell it in England. On which the price there fell, very much to the loss of Richard Earl of Cornwall, so well known by his having been elected King of the Romans.

"L. B." (Tower-hill).—We cannot deviate from the course specified: it can only appear with the writer's name attached.

In the notice of the action, Nicholls v. Stevens, in last week's Journal, the verdict was wrongly stated to have been for the defendant. The cause, being a very important one, is fully referred to in our present Journal, and the principal features commented upon, so that the paragraph in our last may be considered as superseded.

The Cost-Book System.

Having repeated applications for particulars respecting the Cost-book System, we have reprinted, as a pamphlet, the paper descriptive of its principles and practice, which appeared in the *Mining Journal*. Copies can be procured through any bookseller or newsman, or at our office, price 6d.

* * * We must impress upon our correspondents, the necessity of invariably furnishing us with their names and addresses—not that their communications should, consequently, be noticed, but as an earnest to us of their good faith.

* * * It is particularly requested that all communications may be addressed—

TO THE EDITOR,
Mining Journal Office,
26, FLEET-STREET, LONDON.

And Post-office orders made payable to Wm. Salmon Mansell, as acting for the proprietors

THE MINING JOURNAL
Railway and Commercial Gazette.

LONDON, AUGUST 30, 1851.

The *Mining Journal* is published at about Eleven o'clock on Saturday morning, at the office, 26, Fleet-street, and can be obtained, before Twelve, of all news-agents, at the Royal Exchange, and other parts of London.

A case of considerable importance to the mining interest was argued in the Vice-Warden's Court last week—that of **THOMAS NICHOLLS v. JOSEPH STEVENS**, both of Redruth. The declaration stated that on the 19th February last, the plaintiff purchased 5-256ths in the North Tolgus Mine of the defendant, at 20d. each. On the 22d, defendant signed the transfer paper and received a 100/- cheque for payment. Two or three weeks after, plaintiff, on presenting the transfer for registering the shares into his own name upon the cost-book, was told by the purser, Captain Wm. Sincock, that there being only four such shares in STEVENS's name, he could not accept it. Shares were worth 22d. 10s. on the 24th March. Thus stood the matter until the 21st May, the shares continuing to drop in value, being then only worth 9d. each. During this time defendant contended that he had five and not four shares in the mine, and which ultimately proved to be so, the error being on the part of the purser; the plaintiff, however, put

the matter into his attorney's hands, and defendant signified to the purser that if he lost the trial he should look to him for compensation, the fault entirely resting with him. The sum claimed was more than 100/-, because if plaintiff had had the five shares he bought in February, he might have sold them at a profit of 2d. 10s. each on the 21st or 24th of March—say 12d. 10s.; then there was six months interest on the 100/-—say 2d. 10s., making plaintiff's claim altogether 115/-.

Captain Wm. Sincock, the purser, was examined, and proved by the cost-book that defendant had, on the 11th February, 10 shares in North Tolgus. On that day he transferred one to Mr. Price, and on the 20th another to same person, and one to Mr. Trellaw, which latter, by mistake, he entered in the book as two instead of one, upon which arose the dispute between the parties. On the 21st, one share more was transferred to Mr. Gray, and on the 25th, one to Mr. Mills, which was the last entry on the books in the name of defendant, his name still standing thereon for four shares, when in fact it ought to have been five. Defendant had told him, the purser, he had sold the five, but the purser swore he had never seen the transfer until produced in court.

Mr. Wm. Semmon's was present when the bargain was made, and agreed with plaintiff to take one moiety of it from him within an hour after; it was purchased on the 24th March at 22d. 10s. each—that was the highest price they ever went to. In the latter part of May they were down to 10/- Considered that when a person received money for shares, and knew there was any difficulty with the purser about transferring them, that it was his duty to see the purser and have the matter rectified. It was very remiss if he did not.

Mr. Stokes then addressed the jury for defendant, contending that he never did agree to take on himself the registration of the shares or transfer; it was not thrown on him to do so either by the custom of the county or by this particular contract. He had, in fact, really done all that was required of him when he signed the transfer. It was then the duty of the buyer to go with it to the purser, in order to get his own name placed on the books as the recognised owner of the shares, and it was the purser's business to see it correctly done; and that the vendor had really the shares in his name to transfer. Instead of plaintiff doing this, he had neglected to do it, and the purser had never beheld the transfer until produced that day in court. Defendant had sold shares to four other parties within a week of the date he did so to plaintiff, and the parties found the purser at home, and got the shares regularly transferred, without any demur or hindrance. Plaintiff, therefore, by his own conduct in allowing this lapse of time to take place without repudiating his bargain, had waived his claim to recover damages, and must now stand to his contract; besides, the defendant ought not to be saddled with the consequences of the purser's error. Such being the defence—

His Honour (the Vice-Warden) in summing up to the jury, said that when the seller gave a ticket or letter of transfer, addressed to the purser, he did not think, either in law or practice, that the seller had done all that was required. In the first place the transaction was no sale till it is entered. The buyer, unless entered, is not liable for costs—the remedy being only against the person whose name is on the cost-book. On the other hand, if the buyer does not take care to have his name entered, it is at his own risk; for the seller might again sell the share to a person ignorant of the first sale, and who, if he used proper diligence, would be the purser; and the first buyer would lose his bargain. He (the Vice-Warden) recollects the case of a banker who held a transfer ticket as a security, and did not cause his name to be registered in the cost-book. By so doing, he ran a great risk. Where a man, then, buys of a shareholder, it is the duty of that shareholder to see that the transfer is entered on the cost-book. The purser is the agent of the adventurers, particularly so to keep the cost-book in a proper position as to the register of shareholders, and if he refused to enter the name of a purchaser, the seller must answer for it to the purchaser; and, though a purser may be most obstinate, wrong-headed, or malicious, and refuse to do it, still the seller has agreed when he made the sale that he shall do it. He has agreed for the act of his agent, and it is no excuse for him to say the purser was obstinate; for the answer would be, if you choose to have such an agent, you must stand by his acts. The purser may refuse to transfer until the back costs are paid; but suppose he makes a mistake, and they have been paid, and in consequence of the delay the buyer loses the advantage of a considerable bargain; it is hard on the seller that the purser should have made such a mistake, but it is still harder on the buyer, who has paid his money, and requested the purser to enter. He has done all he could do, for he has no command over the purser till he is entered on the cost-book; the purser is not his agent till that is done. The loss, therefore, if any occurred, was not so hard on the seller as the buyer, for the seller may have his remedy against the purser; for if through carelessness, ignorance which was avoidable, or any malice, he refuses to enter the name, he must abide the consequences; and if an agent does not behave well during his agency, he must repay the damage to his principal; the loss falls on the right shoulder. In this case, it is said that if the plaintiff had gone to the purser between the 22d Feb. and 2d March the shares would have been registered without difficulty; but I do not think he was obliged to go at all, nor that it is any part of the custom that he should. His Honour then put it to the jury whether they thought the purchaser bound of his own accord, without being asked by the seller to enter the transfer on the book? He did not think he was, but if the seller desired it, he then was bound. "Do you think the seller of a share satisfies the sale by handing over the certificate? It is quite clear to me he does not. The moment the purser says there are back costs, or that the seller has not the number of shares, or makes some other objection, then it seems clear to me that it is the seller's business to perfect the transaction, by going to the purser, and having the matter explained. If you think the plaintiff has not been negligent, but that the defendant is at fault in not having fulfilled the bargain, the verdict will be against the defendant." The jury retired for two hours, considering their verdict. They gave damages to plaintiff 12d. 10s. if the shares were immediately transferred, or 6d. 10s. if they were not.

Our readers will have perused, with interest no doubt, the two communications in our Journal of the 16th instant, on CALLOW'S POWDER; and it must be acknowledged that unless those statements are controverted on the *highest* authority, we have made a decided advance in the inquiry which we originally suggested. We may divide that inquiry into three parts, so far as it materially affects the public in accepting the powder as a subject for preliminary trial.

—1. As to the chemical properties, to ascertain whether it is so far detrimental to health as to require its special prohibition.—2. With respect to its capabilities for mining operation, by experiments in the hands of practical workmen; and—3. Whether the conditions of its manipulation in manufacture and treatment in transport imply so much imminent danger as to justify an authoritative interposition to preclude such lamentable catastrophes as those which have often appalled the public mind, by the relation of wholesale destruction at even some of the best-conducted powder mills, and which, in fact, coerced the representatives of SCHENKELIN's patent to abandon their costly purchase.

Without any disposition to admit the utility of innovations, unless on adequate proof of their just claims to the favour of our readers, we think there can be no doubt that the investigation has progressed in this case satisfactorily, so far as it has gone. We read in the report of Mr. Campbell, known to most of our chemical friends as a rising and careful practitioner, a cautious but decided affirmation of the proposition, that the chemical properties of this powder are by no means of the pernicious character that some, without examination, have supposed. This document is what professional men will call a *safe* report; it is sufficiently reserved, and strictly limited to the points involved, to convince us that the analysis has been conducted under a due sense of the responsibility which must attach to the chemist, if there be discovered any attempt to mislead. Although varying in some respects from the observations of our correspondent "Pyrotechnist," the general results of the experiments are near enough to afford a mutual check. We should have anxiously desired to attach to the communication of our anonymous correspondent the sanction of his name, which, if not that of an "eminent" chemist, would, from his evident disposition to treat this subject impartially, convey to those interested an unimpeachable testimony. However, that permission being withheld, we must allow the case to rest on its present basis.

Upon the second branch of the inquiry there may be something preparatory now said. It is needless for us to express any distrust: the patentees will find obstruction enough in removing the objections which must originate from the timidity of the parties expected to use the invention, and the assertions of those whose profits are likely to be interfered with. Naturally every district will have its own introductory experiment. We

leave the captains to protect the interest of their mines in regard to the power of this powder, and the comparative advantage of its application. They are quite competent to detect any misrepresentation, and the only fear is, that excessive caution and prejudice on the part of individuals may preclude in some instances a fair trial. But though such conduct would be highly reprehensible if carried too far, it may be excused in part, as an error on the right side. Mr. CALLOW has sent us a long series of testimonials, which we cannot admit in its present form. We observe attached to those certificates the names of many known through our columns as skillful men. Amongst others, we notice favourable communications from Captain WEBB, late captain, and Mr. BROWN, present manager, at Great Polgoon, and Mr. CORLETT, her purser; from Messrs. H. SKAREL, of Cwmorthin Slate Quarries; C. J. HARVEY, Dolgelly, North Wales; E. DAVIES, Rhosyddol; J. HOSKINS, Dwyngwm; T. REYNOLDS, Wheal Vincent, &c. We cannot doubt that these communications express the conscientious opinions of the writers, whom we consider perfectly competent to decide on the power of the powder, though we dissent from some of their views. And, *apropos*, we have here to suggest a word in contradiction of the directions as to increasing the diameter of the charges: we rather counsel the miner to diminish that of his boring, which will save time and trouble, and reduce expense. We have said enough for the present to announce the extent to which this part of the investigation has extended.

The third part will be open until we learn the result of the experiments promised by Mr. CALLOW in his last letter. We, however, presume to offer an advice, that previously some experienced men should be invited to propose the conditions under which the trial may be pronounced effective. Taking into account that there is required no grinding or milling of the combined materials, and that ordinary friction between iron and wood has not the effect of exploding it, we do not anticipate that much danger will ensue in manufacture—with proper management, we can even suppose that the risk might be less. In fine, the experiment under Captain CHAD having established that it may be discharged from a mortar in a shell, and bear the consequent concussion, violent as it must be, there is a pregnant corroboration of the patentee's assertion, that with the ordinary care devoted to gunpowder, the use of this powder may be rendered sufficiently safe—an assumption we shall be glad to find sustained by the promised experiments.

We have ever felt it our duty as journalists to bring under the notice of our readers all improvements connected with the productive resources of the country, and amongst which must be considered those of our correspondent, Mr. THOMAS CRADDOCK, as relating to the steam-engine. For a considerable time they have appeared to us such as, from the soundness of the principles upon which they are based, and the importance of the machine to which they relate, to deserve our attention; consequently, we have watched with considerable interest the progress of their development; and from a former inspection made by us of the engines and boilers the inventor had then made, we had the satisfaction to find that the mechanical adaptations were such as to strengthen our growing opinion that, by these inventions, the steam-engine would become a far more valuable auxiliary to the productive arts, and better adapted to cheapen and extend intercommunication, both by sea and land, than, perhaps, few are even yet prepared to admit. We have lately inspected these improvements a second time; and, we must confess, the more we investigate these inventions, the more are we convinced that they are not only sound in principle, but that the mechanical arrangements are practically simple and effective, and such as will ensure economy and safety, with greatly diminished weight and bulk of machinery for any given power. We also think that any competent and impartial person who investigates these inventions will be brought to the opinion that the result of the inventor's calculations, as to the saving of 20,000,000l. annually, is not so destitute of probability as many statements are on which the public is wont to place considerable reliance.

From the investigation we have given to the subject, we think the saving of 20,000,000l. annually is so far based upon strong probability as that the public interest requires that these inventions should no longer remain under the denunciations of the engineering profession. As without attributing to engineers any other motives than those which influence all men in their commercial relations, we think it betrays gross ignorance, and such as we should not anticipate in the present age, that any one should expect the proprietors of our first engineering establishments to commit such an act of commercial suicide as to recommend inventions such as Mr. CRADDOCK's—the very comprehensiveness and importance of which they know, better than most men, will militate so much against that kind of steam-engine which their works are so well adapted to construct, and which by long practice and great expense, with a well-arranged system, has established and maintains their pre-eminence in the market. It is, therefore, as natural that such parties should use every means in their power to prevent the public appreciation of inventions such as Mr. CRADDOCK's, as that the owners of public-house property on the old coach routes, and the proprietors of stage coaches, should have endeavoured to stop the progress of locomotives and the extension of railways. May we not, therefore, hope, for the credit of Englishmen, that in this, the year 1851, some really practical, scientific, and unprejudiced parties will come forward, and, at least, investigate these inventions in an impartial manner? And if such investigations impress them as they have us, we feel assured they would materially aid the inventor in the unequal contest he has hitherto had to sustain.

A few days prior to the prorogation of Parliament, an important appeal case was argued in the House of Lords, inasmuch as it was the first of a new class, as to the question of railway liabilities, and on the decision given by the Peers depended the liability or non-liability of several hundred individuals. Great interest was, however, attached to it, as the Master, in his report, drew a line as to the periods at which the liability of the appellant commenced and terminated. The appellant, Bright, was one of the provisional committee of the Direct Birmingham, Oxford, Reading, and Brighton Railway Company. This association had been provisionally registered in 1845. The proposed capital was 2,000,000l., divided into 80,000 shares of 25l.—the deposit to be 2d. 12s. 6d.—2d. 10s. to meet the standing orders of Parliament, previous to the introduction of the bill, and the remaining sum of 2s. 6d. for preliminary expenses. One hundred shares were allotted to the appellant, who duly paid his deposit of 2d. 10s. on

community; at the same time promising, if possible, to deliver judgment previous to the prorogation of Parliament. Owing, however, to the difficulties of the case, and the absence of the judges upon circuit, this could not be done, and consequently the decision was postponed. This is to be regretted, as it will leave for some considerable period a number of individuals in doubt as to what engagements they have to meet, what liabilities to encounter. There are numbers, probably, who anticipate that judgment may be postponed until next session, the year 1852 being the *annus mirabilis* in which the Statute of Limitations for sundry good deeds committed during the railway mania expires. Uncertain as the law is, and dilatory as its proceedings generally are, we trust, in this case, the decision of the Lords may be speedily made public, so that parties who speculate can no longer plead ignorance of the responsibilities they incur. In our opinion it is much better and more healthy that a judgment should be given, even though it should be adverse to numerous individuals, than that the present uncertain state of things should exist, or the dilemma be avoided, and the clear reading of the law postponed indefinitely, owing to the fortuitous circumstance of the expiration of the Statute of Limitations. The country has scarcely yet recovered from the re-action caused by the reckless speculations of 1845-46, which, although it enriched some individuals, beggared a far greater proportion. The legitimate employment of capital should be fostered and encouraged, but whenever it degenerates into the spirit of gambling it should be checked, as then it can only tend to demoralize all those who come within its baneful and fatal influence. To effect this, experience has shown that some stringent provisions of the law are highly necessary. In the present instance, it would be presumptuous on our part to anticipate what may be the judgment in this case. We have, however, so much confidence in the honourable and learned men who at present grace the ermine, as to believe that the decision they arrive at will be based upon the principles of law and equity, and such as to meet the difficulties which, from a complication of circumstances, have hitherto prevented a clear exposition of the law on these knotty points. Whatever decision may be given cannot be supposed to please all; such is not to be expected; but if a clear knowledge of the liabilities of directors, provisional committee, allottees, *et al genit omne*, is attained, it will render every one cautious as to the solvency of the parties who may be placed in any of these positions; and reckless characters and needy adventurers will not be enabled, as heretofore, so easily to plunder their fellow-men with impunity.

In the MINING JOURNAL of the 9th inst. we noticed the adoption of a portable steam-engine for the purpose of whipping coals in the port of London, to enable vessels more rapidly to discharge their cargoes, and place them on a better footing in the race of competition with railways. This competition of railways with shipping in the carriage of coals is not alone creating attention in the port of London; much excitement has arisen lately on the subject in the minds of both shipowners and colliery proprietors in the north, many of whom view the present movement with despair, and prognosticate that at the low freight which the rail now charges for the transit of coal, the shipping must be thrown out of employment. We are not of those who willingly examine only the gloomy side of a picture: with economy, making more frequent voyages than heretofore, and the adoption of every appliance which science has placed at their command, we see no reason why the shipping interest should fear the result of even this giant competition; but it should by all means be placed on an equal footing, and not be saddled with impeding burdens from which the railway interest is free. This is by no means the case at present: from the parliamentary returns it appears that the Corporation of London, in the year 1850, taxed the colliery shipping for entering the pool 195,595*l*, made up of three distinct tolls—8*d*. per ton shamefully imposed on this particular trade by the London Bridge Approaches Act, producing 120,365*l*; its 1*d*. duty, amounting to 15,280*l*; and its 4*d*. tax, amounting to 60,000*l*: making a total tax of 1*s*. 1*d*. per ton. Well, perhaps, would it be if these were all; they are not only taxed in the port of London, but they must pay for the privilege of taking in cargo on the harbours of the Tyne, the Wear, or the Tees, as well as large sums to the Trinity House for lighting them on their road. Indeed, this latter very immaculate body do business to some effect: during the last year the cost of maintaining lighthouses amounted to 97,211*l*. 3*s*. 2*d*., for which they charged the moderate price of 195,824*l*. 5*s*. 4*d*., something above 100 per cent. profit. From these annoying and oppressive drawbacks railways are free, and it no longer remains a question of simple justice but one of national policy, and commensurate with the advance of the age, that the shipping interest should be freed from this incubus of direct taxation for the benefit of others, and that the public departments for the support of which these taxes are levied be kept up by some other and less objectionable means.

The inquest on the bodies of the unfortunate sufferers by the Washington Colliery explosion, after a lengthened inquiry, has terminated; a multitude of evidence has been heard, and the jury have delivered the following verdict, which it becomes our melancholy duty to record:—

We are of opinion that WILLIAM HALL, and thirty-two others named in the deposition, came to their deaths by the firing of Washington Pit, in M'NAIR's board, on the 18th August last; and we are also of opinion that the air having been highly charged with gas previously, and probably receiving a sudden check, had caused the fire to increase outside of its board—that lamps ought to have been used instead of candles, and that there should have been more brattice used, as recommended by Mr. DUNN."

Among the witnesses examined was Mr. NICHOLAS WOOD, colliery-viewer, of Hetton. This gentleman picked up the bottom part of a lamp, which led him to suppose the fire was caused by the top of the lamp having been taken off; he further deposed as to where the fire took place, and stated that something must have happened to have checked the ventilation of the mine at the time it fired. In this he was corroborated by Mr. THOMAS EMERSON FORSTER, Mr. ANDERSON, Mr. GEORGE SOUTHERN, and several other eminent viewers. Several pitmen were likewise examined, and their evidence went to prove that they had for some period apprehended that an explosion would take place. The Government Inspector, Mr. MATTHIAS DUNN, stated he had examined the pit since it was fired. He was of opinion that the fire had originated in M'NAIR's board, but thought there had been a deficiency of ventilation in the eastern quarter. After some further observations, he stated that if the men working at this colliery had acquainted him with the facts which they had stated on this inquiry, he would have felt it his duty to examine the pit, and this he wished to be understood by pitmen generally. An intelligent correspondent, "A. B." in our last Journal, remarked that the miners on this melancholy occasion were looking up to the effect of the Government Inspector's investigation, and from the observations made by Mr. MATTHIAS DUNN, it will be seen that the complaints of the pitmen will find every attention on application to him. From communications since received from the same gentleman, it would appear that the general opinion is, that the explosion occurred from the workman, M'NAIR, having uncovered his safety-lamp, the top or gauge of it being found at a short distance from the safety-board; this was fully corroborated by the evidence. It may here be mentioned that this is the third explosion which has taken place in this pit within the present year. About three months since, two lives were lost; three weeks ago another occurred, and when fortunately no one perished; twenty-three years ago, fourteen lives were lost. Having now recorded the fact, it would appear here a work of supererogation on our part to make any remarks. We have so often pointed out the evils, and the remedies which, if they would not entirely prevent, would at least alleviate many of the calamities which we regret to say are now almost of daily occurrence.

From the testimony of Mr. WOOD, it would appear that the explosion took then, must have occurred from the ignorance, rashness, or carelessness of some of the workpeople. We have insisted previously on the necessity of protecting the workman against the consequences of his own recklessness: here we see experienced men are met at the inquiry, though all agreed as to where the fire took place, it is left to suppose what was the cause. Some months since we drew attention to the system of Government inspection of mines in France, showing how fearfully disproportionate were the regulations and inspection we employed. The three inspectors (for the fourth has now resigned) are men of the greatest talents and unquestionable abilities, but had they the strength of HERCULES, or the ubiquity of FORTUNATUS, it would be impossible for them to execute their task satisfactorily to the public or themselves. It may be well enough to know the cause of an accident, but it is much better to be able to prevent it. Some proper system of ventilation should be adopted; a control kept over the lamps and the workpeople, which would in some measure prevent this awful waste of life. On the same day as the fearful accident on which we have commented occurred, seven lives were lost at the Ubberton Collieries,

and this from the *nonchalance* and *laxness* of the foreman, who has now expiated his recklessness and folly with his life. His duty was to have seen the workings clear of fire-damp previous to the labourers entering the pit: so confident was he that no fire-damp existed, that he neglected the precaution of making the usual examination, and, along with six other persons, entered the workings, the whole having in their hands *naked lights*; an explosion took place, and all perished. This requires no comment.

It would appear, that since Government have taken the matter in hand, accidents are rarer, and to misfortune we have now to add crime. A few weeks since, at the Malago Vale Colliery, five unfortunate persons, it may be remembered, were killed through the breaking of the rope. One borrowed from a neighbouring colliery was substituted in its place; this, on last Monday, was cut across by some diabolical ruffians; and had it not fortunately been examined previous to the descent of the cart, no doubt those who were in it would have been precipitated into eternity. MESSRS. REYNOLDS and CO., the proprietors, have offered a reward of 50*l*. to those who will give such information as will lead to the conviction of the miscreants who committed this abominable outrage, and who, we trust, will receive the due punishment they deserve.

We do not profess to offer a panacea for *such evils*; the law will furnish that. But there are numbers of practical plans which, if adopted and properly carried out, would do much to lessen the present ills. We need only refer to, among others, MR. GOLDSWORTHY GURNETT's steam-jet, which has been effectually tested and tried; MR. BENJAMIN GIBBONS' plan, and several others of our correspondents. On the 9th Aug., we published a letter from MR. WEBB, of St. Austell, who professes to be able to introduce a perfect ventilation, and free the mine from deadly matter, so that naked candles may be used. This opinion he reiterates; but asks whether Government will pay any attention to suggestions on this question of national importance? To this, we answer—No. Governments are, in general, supine; and a Whig Ministry possesses more than the usual *vis inertiae* of officials. All our great works in England have been done by private enterprise; and to suggest any measure of practical utility to the Home-office, or any other Government establishment, would be a loss of time. No effectual measure can be obtained from the present Ministry. The defects in the system we have often pointed out, together with the mode in which they could be ameliorated. The claims of the working miner and collier we have always advocated. We shall continue so to do, in the confident hope that, by perseverance and energy, the desired end may yet be attained; but, to effect this object, we must have the co-operation of "one and all."

Our attachment for a MINING EXCHANGE, and our efforts to promote the complete establishment of such an institute, are well known; and inasmuch as the public have been led to expect that a good *bonâ fide* mining mart, affording confidence to capitalist adventurers, would result from the proceedings of the body of gentlemen who, as appeared by our Journal of the 12th April last, opened a Mining Exchange at the Jamaica Coffee-house, Cornhill, and who, as also appears by our Journal of the 2d inst., fixed upon the Hall of Commerce, Threadneedle-street, for their subsequent meetings, we have thought it our duty to pay a visit to the new Mining Exchange, hoping to "report progress," and which we are now enabled to do.

There can scarcely be two opinions as to the very judicious arrangement in selecting the Hall of Commerce; indeed, it would hardly be possible to obtain better quarters for the purpose. The northern end of the great Hall (which is one of the finest rooms in Europe) is, with a capital secretary's room, screened off from the rest of the Hall by an iron railing and damask curtains, so as to ensure privacy to the members of the Exchange, and without deteriorating the elegance of the building. The Exchange is handsomely furnished, and will well accommodate an assemblage, if needs be, of 100 persons. In addition, each member becomes as such entitled to all the privileges of the Hall of Commerce, which is open from 9 A.M. to 6 P.M., and is supplied with many of the leading journals of the world, and most of the newspapers of Great Britain and Ireland, and with maps, charts, itineraries, &c. Every attention is paid to the postal department, and for bodily comfort there is a well-appointed refreshment-room adjoining. We, therefore, think that very great credit is due to the committed and secretary of the Exchange for the effected arrangements.

Something more, however, is required to completely establish the Mining Exchange;—it is a much larger number of subscribers. Capitalists, as well as brokers, are essentially necessary to each other; and it will be a very mistaken policy of the present body, who are chiefly brokers, if they adhere to an annual subscription of 8*s*. 8*d*. We have seen by their amended rules that they are reasonable men. As such, we would suggest to them, with every wish to foster the establishment, that they cannot act too openly and liberally towards each other and the public. The days are gone by for exclusiveness in business. The great mining wealth of this and the sister island can only be developed through the honest open competition of large numbers, having a Mining Exchange, almost as open as the Coal and Corn Exchanges. Let, then, the members of the Mining Exchange try a 5*s*. 5*s*. annual subscription; and they will, we firmly believe, find their numbers very considerably and beneficially augmented—indeed, we are credibly informed that there are many persons, all known to each other, anxious to join, but who are deterred solely by the high annual charge of 8*s*. 8*d*.

We would also suggest to the committee, that a very important part of their duty should be to make the Share-List as correct as possible; and, further, as they are the soul of the Exchange, that they show, by their punctual attendance at their appointed hour of meeting for business (12 o'clock), their sincere interest in the scheme.

Now is the time to pursue a course of perseverance in establishing a Mining Exchange upon a broad and liberal basis. With this in view, we have no doubt but that the project will be attended with good results.

One chief object with the members ought to be, rather to keep up, and not to, Dutch anachorite-like, knock down the value of each other's property. Retaliation is a very dangerous two-edged sword. Mining adventurers must, of necessity, form a very incongruous body; but, nevertheless, all possessing some latent virtue—*Alterius sic altera posuit opem*.

THE AMERICAN IRON TRADE.—A return of the imports of iron into the United States for the first six months of the years 1850 and 1851 respectively, shows the whole amount in 1850 as 89,605 tons 8 cwt. 1 qr. 5 lbs., while in the present year it has been 107,209 tons 14 cwt. 0 qr. 25 lbs., being an increase in 1851 over the corresponding period of last year of 17,604 tons 5 cwt. 3 qr. 20 lbs. The items show that the excess had been in English sheets and plates, 1880 tons 9 cwt. 3 qr. 1 lb.; bars, 2088 tons 6 cwt. 3 qr. 7 lbs.; hoops and rods, 3648 tons 18 cwt. 1 qr. 9 lbs.; railroad iron, 2388 tons 2 cwt. 1 qr. 21 lbs.; pig-iron, 7270 tons 3 cwt. 2 qr. 7 lbs.; Swedes and Russia, 528 tons 5 cwt. 0 qr. 3 lbs.—Total, 17,604 tons 5 cwt. 3 qr. 20 lbs.

THE ROYAL BRITISH BANK.—In a paragraph which appeared in our Journal of the 18th inst., on the Britonferry Iron-works, allusion was incidentally made to certain strictures and statements which had appeared in the *Reporter*, as to the conductors and management of the British Bank. We have since received a copy of "the third half-yearly report by the court of directors to the proprietors of the Royal British Bank, being for the half-year ended the 30th June, 1851;" in which it is stated—"The directors have the pleasure to submit to the proprietors the report and abstract balance-sheet of the bank's affairs for the six months ended on the 30th June last, being the third half-year of the bank's operations: the directors rejoice that it is favourable and encouraging one. It shows a dividend of 5 per cent. for the last half-year, being an increase of 1 per cent. on the dividend of the first year, ended on the 31st Dec., 1850, after appropriating a sum of the same increased amount as an addition to the reserved fund. There has also been applied in liquidation of the preliminary expenses and cost of premises, 849*l*. 2*s*. 8*d*. exclusive of leaving over unappropriated, and carrying to profit and loss for the current half-year, a sum equal to the dividend." It is further stated—"On the aggregate operations of the bank there has been an increase, during the last six months, of 76 per cent. on the number, and 61 per cent. on the amount; the number, since the opening, being 44,824, amounting to 29,402,305*l* and averaging 66*s*. 2*d*; thus indicating very strongly the utility of the establishment to the middle classes."

Original Correspondence.

THE IRON TRADE:

IS THERE NOT A WARRANTY IMPLIED THAT BAR-IRON SHALL BE OF MERCHANTABILITY QUALITY IN A SALE BY AN IRONMASTER TO FURNISH HIS MAKE, AND DONE IN THE ORDINARY COURSE OF BUSINESS?

SIR.—I am very desirous, as an old subscriber to the *Mining Journal*, and one who has witnessed the independent and zealous part which it has taken in all that concerns the interests of mining and the metal market generally, to bring under your notice a case involving matters of great importance to those who may be engaged in the iron trade, and which I do in the hope of eliciting some observations from yourself, or some of your numerous readers experienced in the subject.

I and my predecessor have been engaged in the iron trade for the last 40 years, principally in the sale of Welsh bars to the neighbouring mines, receiving the article direct from the works. I have, therefore, had some acquaintance with this branch of trade; and I may say, until the commencement of the present year, I have never had reason to complain of the quality of any bought direct of the manufacturer; and I will now briefly narrate the circumstances of the transaction alluded to, which has been a great loss and grievance to me, and the course I followed, being in the hope of eliciting some observations from yourself, or some of your numerous readers experienced in the subject.

An order was given to an ironmaster, with whom I had previous large transactions, for a lot of iron at an agreed price, to be put on board in Wales. Nothing was said about the quality of the iron, as it was from a firm of high standing, and whose mark was believed to be of an approved make. When the cargo was shipped, the invoice, the bill of lading, and the draft for the amount were forwarded me, and which latter was returned at once accepted; and so I thought the transaction closed—all being in strict conformity with the usage of the trade.

In due course of time the cargo arrived safe; but after the draft had been returned, and as soon as the iron was landed, it was pronounced by every one who saw it to be of a very inferior quality, as far as appearances went; and only one bar in twenty bore the accustomed mark of the works. I had it tried by the most experienced smiths of the neighbourhood, and they all concurred in the following report:—"It will not bear being punctured or bent; and when brought to welding heat it breaks off brittle, like cast-iron."

I wrote to the firm as soon as the iron was seen, on its first appearance: They desired to know in what consisted its bad quality, recommended me to give it further trial amongst my customers, and concluded by saying that if the complaints continued to be made, they were quite ready to meet the case fairly. On the next day after thus hearing from them, being about one month from the arrival of the cargo, an account was brought me from a large and respectably-conducted mine, where three tons of this iron had been supplied, stating that the quality was so bad that they could not use it, and informing me that it must be taken away as unfit for the purposes it was wanted for. From that time, and after having assured myself by other trials of the fact of its bad quality, I determined to sell no more, and to call on the firm to take it back from me, having all but seven tons on my hands; but the firm, notwithstanding their distinct promise to do what is right and fair, have not done anything to redress the wrong up to the present time, thus by the delay greatly aggravating the inconvenience and adding to the loss. Their plea is, if I understand them right, that they deny that the iron is bad, and would have one believe that the Cornish smiths do not know how to work bar-iron properly; and then they also fall back that in the sale there was no warranty about quality specified.

I pass over the inquiry whether it is becoming an old and high-standing firm to act in such a manner, after the promise they had made, as a question of personal wrong. I must seek my own remedy; but I wish to press on your consideration the two reasons given for their justification. They disclaim the charge of inferior quality in the face of the strongest evidence that can be obtained, and if not proved, how is it to be more plainly shown? Then, as to the question of warranty, is it not altogether new to set up such a reason? Is not every manufacturer responsible that his product offered for sale is merchantable, and fit for the purposes it is reasonably proposed to be applied to, and on the faith of which it is bought? And although no warranty may be expressed to the full extent of its being equal to those purposes, I venture to believe a warranty is implied, and on which I should be much pleased to know your views.

August 25.

A CORNISH IRON-MERCHANT.

[There can be no question as to a warranty being implied; and we can only express our surprise that manufacturers of iron, "a firm of high standing," with whom it appears our correspondent has "had previous large transactions," should be found acting as represented, so directly in opposition to their own interest, and so un-merchant like. The want of the firm's mark on 19-20ths of the bars would appear as though there was some error in the delivery of an article different from the order, especially as that supplied will not "bear being punctured or bent, and when brought to welding heat breaks off brittle, like cast-iron." Such iron is not adapted to any mining purpose, and is certain of being sent back, to the merchant's risk of losing future orders by the supply of bad and useless article. Surely the parties can refer the matter to the adjudication of some uninterested party on the spot, who, by seeing the test applied, could settle the dispute in a couple of hours; this would show "they were quite ready to meet the case fairly." The idea that Cornish mine smiths do not know how to work bar-iron properly is too ridiculous to need comment. We should be glad to learn what class of iron operators have had more experience. And as to "warranty about quality" not being specified, we unhesitatingly say the "firm of high standing" would send their travellers round Cornwall for orders in vain, were they to adopt so bad a subterfuge.]

THE IRON TRADE—FOREIGN TARIFFS.

SIR.—The following extract, translated from the *Memorial* published by the representatives of the German trade, assembled at Cassel, on the 5th of May last, shows that even protectionist wisdom can be at fault, and is on a par with the late news from France—that there, whilst other manufacturers are well supplied with orders, the ironmasters complain loudly of the depression:—

Other trades have of late improved, not so, unfortunately, the iron trade, but rather to the contrary, for prices are now lower than they have been during the last three years—resulting, in a great measure, from the abolition by the Dutch Government, last August, of river and transit dues on the Rhine. In Ruhrort, and at the Rhenish works, the price of Belgian pig-iron has been at least 10*s*. to 15*s*. per ton *under average prices*, and, as a consequence, the production in the Rhenish districts principally affected has considerably decreased—viz.:
 From about 53,636 tons pig-iron in 1847
 To 49,189 " " 1848
 And 44,347 " " 1849
 With still more disastrous results in 1850 and 1851.
 The make in Luxemburg was—
 1847 12,172,000 kilogrammes pig-iron
 1850 6,596,000 " "
 And of 16 furnaces there are at present but 7 in blast.
 The Duchy of Nassau fares no better; and, indeed, the disadvantages of a lower duty on Belgian iron may be traced throughout the whole Zollverein. Thus, for instance, Nassau is obliged (being kept out of the Westphalian and Rhenish market by Belgian iron) to force sales in Southern Germany, and prices are, consequently, as depressed in Rhenish-Bavaria and Baden, as though these localities were in direct communication with Belgium. Besides this, the Rhenish and Westphalian works being enabled, by the cheap Belgian pig-iron, to manufacture cheaply, compete with bars, rails, and sheets, even in Silesia, and thus in their turn depress the prices of iron made solely from German pig, which itself is, of course, hereby depreciated. The make of bar-iron on the Rhine has been as follows since 1844, when the present tariff came into operation:—
 1844 about 34,947 tons
 1845 48,557 " "
 1846 56,775 " "
 1847 75,070 " "
 1848 45,074 " "
 1849 39,885 " "
 These figures tell their own tale, and require no comment; nor can we wonder that foreign ironmasters should seek golden eggs, as long as they find geese to lay them. The iron trade in England is certainly not very brilliant just now, but improvement is at least probable, and, thank Heaven! it is not protected.

J.

CALLOW'S NEW BLASTING POWDER.

SIR.—In my letter in your Journal of the 16th inst., accompanying Mr. Campbell's report on my blasting powder, I stated it was my intention to give some extensive experiments to prove its physical qualities as regards friction, &c. As soon as I shall have completed all my arrangements, I intend so doing; and if, in the meantime, any of your correspondents will oblige me by suggesting any particular test to which they think my powder should be subjected to advance the question in point, I shall be happy not only to benefit myself, but to meet their wishes.

A correspondent, signing himself "G. C." in your last Journal, is anxious to have certain questions answered. First, assuming the condition said by him to be general, which I cannot admit except for sake of argument, it is asked—"will

fore, the cartridges are made of wood, and of strength sufficient to stand all tampering, regular and true in their shape, and if the miner will use a boring-bit the eighth of an inch *larger* than the cartridge, and work as he ought, such a case as "G. C." suggests could not by any possibility occur. Should he, however, use a *smaller* bore than the diameter of the case, of course it will not go down at all. This difficulty would apply equally to any cartridge (Copeland's for instance) in mining operations, for these would stick and lose their efficacy to a much greater extent than mine, as I shall hereafter show. However, the most ignorant would avoid so gross an error, as no ramming whatever could carry the cartridge to its proper point for firing. My patent cartridges will be made of all sizes, from half an inch in diameter upwards, and if the miners object to adapt their boring-tools to them, I can adapt the size of the cartridge to their tools. "G. C." does not, I presume, mean that the bottom of the hole is smaller than the tool with which it is bored, or forms the apex of a cone. To my apprehension, this appears an impossibility, with the needless and simple precaution of observing that the size of the cartridge is proportioned to the calibre of the bore, which can be done without any impediment to the miner's labour, or causing him extra trouble. There is a very trite proverb respecting London vehicles that will well apply to this case—"Where the 'orses will go the bus will follow;" and there can be but little difficulty in pushing a cartridge down a hole made with a bore a size larger, or even the same size. "G. C." second question, as to its fouling the workings and injuring the atmosphere, I can satisfy him, by referring to the analysis, as also to the practical use of the powder in the many extensive mines into which it has been introduced, where its *innocuous* qualities, and the remarkable small quantity of "smoke" it emits, has been designated an object of great consideration, as proved by the vouchers in my possession from most experienced miners, and more particularly as oxygen is the principal gas evolved in explosion. It was not without due consideration of all these points, and most elaborate experiments on every possible contingent risk and objection, that I undertook the responsibility of recommending this patent mining powder to the public.

London, August 28.

EDWARD CALLOW.

GUTTA PERCHA CONDUCTORS FOR BLASTING.

SIR.—Your correspondent of the 20th August very justly observes that the use of gutta percha covered wires for blasting is anything but new, as in the beginning of March, 1849, I was about to blow up the *Martha* coal brig at Sutton Bridge, for which purpose I tried the covered wire with the most complete success. As to the size of the battery, I can assure your mining friends that one may be constructed not occupying more than $6 \times 6 \times 4$ in., of sufficient power to discharge at any distance that may be required for mining purposes: its having acted so well for submarine operations, leaves no doubt on that subject. The expense is also trifling; the one I use being made for me by Neeve, in Bloomsbury, on Grove's principle, did not exceed 4*l.* I am only surprised that so simple, safe, and useful a method should be so long in coming into general use.

W. WHITTEN, C.E.

HEMPE ROPES—THE MALAGO COLLIERY ACCIDENT.

SIR.—It seems to us only due to respectable rope manufacturers to notice the remarks in your article last week on the Malago Colliery rope accident. You say—"Here we have one of the deepest mines in the kingdom—a shaft 1440 ft. in perpendicular depth, requiring a rope of enormous strength, and, indeed, peculiar make, to render it moderately safe." As to the "enormous strength" required, it need only be in proportion stronger than for a shallower shaft, and that is simply a matter of calculation in connection with working, load, &c. What we object to most in your remarks is the conclusion of the sentence—"to render it moderately safe." With your leave, we must deny this to be a fact. Having been accustomed to make ropes for pits of equal depths for years, without ever having had an accident from breakage, we think must go a long way to prove that ropes for this depth of pit can be made perfectly safe to work at a reasonable cost to the colliery-owner. If figures are wanted, we can show that the *scare* cost of these "enormous" ropes is very little more than for pits of moderate depth. You will much oblige us by inserting the above in your next Journal, in justice to honest hempen rope manufacturers.

Gateshead-on-Tyne, Aug. 28.

HAGGIE, BROTHERS.

ALCHYMICAL SCIENCE.—No. I.

SIR.—In metallic operations many circumstances of an anomalous nature have from time to time occurred to assayers, analysts, and metallurgical operators, which, had the faculty of METALLIC TRANSMUTATION been as well accredited as it deserves, would long since have ceased to perplex the wisecare, as apparently referrible to no recognised chymical ACTION.

I have often thought over the fact, that when by minute analysis of 5000 grains at once of the argentiferous galena from *Fourtameque*, Canton du Valais, Switzerland, I obtained but 22 ozs. of silver per ton of lead, together with antimony and arsenic, with considerable traces of cobalt, copper, zinc, and bismuth, and subsequently by operating in a particular mode upon 28 lbs. at once, as well as upon 8 ozs., prior to the instances of minute analysis, from 64 to 167 ozs. of silver per ton of lead should appear, with the formation of a *scoreaceous deposit* containing very little antimony or arsenic, but more considerable proportions of copper and cobalt—indeed, so much of the latter as to yield a pale smaltz.

These variations of result from average samples only served to perplex me, until within the last three months, having had occasion to operate upon considerable samples of a mineral sent to me at Paris, from the mountains region of Chalanche, in Dauphiny, I have been enabled to desry positively that antimony, nickel, lead, arsenic, and iron, may be caused to disappear in an alloy *naturally mineralised*; whilst silver, cobalt, copper, and even gold, may be increased in quantity, or even produced!

A careful analysis, in the wet way, of the Chalanche mineral, in its natural state (operating on 500 grains), gave just the same results as when operating by solution upon samples of 10,000 grains—the ingredients being as represented in column A:—

A.	B.
335.5	295.2
160.0	34.7
651.8	629.2
680.2	3347.3
563.2	2982.4
167.2	486.3
504.8	486.2
6.3	1365.0
802.0	647.8
Detritus	4.2
10,000	

Column B. represents a careful analysis, in the wet way, of the mineral, after it has been subjected to a peculiar but inexpensive process, which I cannot now describe, partly on account of the imperfect understanding I have of it, and partly on account of its value and importance in a commercial point of view. I know that this sort of communication of a scientific subject of discovery savours not only of empiricism, but is objectionable on account of its dealing in the suspiciously marvellous—but for the present, at least, this must be.

The same result obtains when 2 lbs. of the prepared mineral (which preparation I shall designate "secondarily mineralised") is roasted, fluxed, and melted in the usual or approved way. Thus, with the decrease in the proportions of antimony, lead, nickel, iron, arsenic, and sulphur, an increase takes place of copper, cobalt, and silver, with the actual production of a trace of gold.

Thus, also, may it turn out at last that the alchymists Geber, Basil Valentine, Raymond Lully, and the rest of the goody company of the alchymists, had good reasons for what they attempted in metallic transmutation at least, whatever the affairs of the "Philosopher's Stone" and the "Elixir Vitæ" might be; and their want of general and intentional success consisted rather in their miscomprehension of the Arabian formulas for this sublime art—derived as they were from the Chaldean and Egyptian magi—rather than to the visionary and empty nature of their pretensions. It now appears to me that not only are metals compound bodies, and fewer in number than is generally supposed, but that the so-called "imponderables"—by me designated FORMATIVE ELEMENTS—are the disposing ingredients in these transmutations; even as I stated in my article on "Liquefaction of Diamonds," in your Journal of 26th June.

WILLIAM RADLEY, Ch.E.

N.B.—The word ACTION in this paper is not intended for *action*; and the word "action," in my former paper, is a misprint for "action," signifying "the known or unknown cause."

THAMES TUNNEL COMPANY.

The number of passengers who passed through the Tunnel in the week ending Aug. 23 was 55,146.—Amount of money, £208 18s. 10d.

New Patents.

LIST OF PATENTS GRANTED DURING THE PAST WEEK.

J. Palmer, Paddington, for improvements in delineating objects, and in apparatus and materials for that purpose.

T. B. Jordan, Lambeth, for improvements in machinery or apparatus for cutting, dressing, planing, and otherwise working slate, and also for framing and setting the same.

J. E. McConnell, Wolverton, Buckingham, for certain improvements in locomotive steam-engines and railway axles, parts of which are applicable to stationary and marine steam-engines.

W. Johnson, Millbank, Westminster, improvements in ascertaining the weight of goods.

P. A. Lecomte de Fontanemoreau, South-street, Finsbury, and Boulevard Poissonnière, Paris, for certain improvements in apparatus for gas lighting.

E. C. Shepard, Duke-street, Westminster, for improvements in obtaining and applying motive power.

DESIGNS FOR ARTICLES OF UTILITY REGISTERED.

W. Price, Manchester, imperial copying press.—J. Britten, Birmingham, a grate.—J. Carter, Delabole, Cornwall, filtering apparatus.—J. Young, Wolverhampton, flooring clamp.—J. A. Drake, Melis, Somerset, an instrument to be used in cases of prolapsus uteri.—J. T. Moss, Baywater, crank split.—J. and J. Holmes, Regent-street, cloak shawl.—H. J. and D. Nicholl, Regent-street, a garment.—E. McMorland and Co., St. Paul's, churchyard, the pelts or hooded shawl.

PROVISIONAL REGISTRATIONS.

T. Forbes, Ely-place, Holborn, parallel vice.—J. Roberts, Portsmouth, paper clamp.—F. J. Earl, Bermondsey, perpetual calendar.—P. Warren, Longton, Staffordshire, danger signal for railways and carriages.—H. Studly, Torquay, "stoker's ventilator."—J. Boydell, Regent's-park Terrace, iron support.—*Mechanics' Magazine*.

THE GREAT WESTERN AND FOREST OF DEAN COAL COMPANY.

Capital £25,000, in 25,000 shares, of £1 per share, paid-up.

PROVISIONALLY REGISTERED.

TEMPORARY OFFICES.—No. 3, BRIDGE-STREET, WESTMINSTER.

DIRECTORS.

WILLIAM ASPDEN, Esq., Great Scotland-yard, and Northfleet, Kent
GEORGE FRANCIS, Esq., 5, Hare-court, Temple, and Brompton-crescent, Brompton
JOHN GARDNER, Esq., 18, Queen's-terrace, St. John's Wood
THOMAS RITCHIE, Esq., 117, Bishopsgate-street-within

With power to add to their number.

BANKERS—London and County Bank, Lombard-street.
MINING ENGINEERS AND SUPERINTENDENTS—Messrs. Cook and George, Drybrook, Gloucestershire.

SOLICITORS—Messrs. Coumbe and Nickoll, 3, Bridge-street, Westminster.

SECRETARY—Mr. Henry Capper.

This Company is formed for the purpose of working a coal-field situated in the Forest of Dean, Gloucestershire, and held by the present proprietors under a grant direct from the Crown, comprising an area of about 150 acres, and contains five seams of coal, of 15 ft. in thickness, three of which it is proposed to work, which will produce upwards of three and a half million tons of coal. One of the seams alluded to produces Cannel coal, of which there is a large consumption in the gas works of London, and of other places. The other two seams are already in great demand, both in the provincial and foreign markets, large quantities being consumed by the steam-engines of West Gloucestershire, the cotton mills and gas works of Bristol, and the iron furnaces of the surrounding districts. Immense supplies are shipped from Lydney under the well-known title of "Forest Wall's-End," a coal equal in quality to the best Newcastle.

Specimens of the various seams of coal from the Forest of Dean have been sent to the Exhibition in Hyde Park by Mr. Atkinson, one of Her Majesty's deputy-governers of the Forest. Mr. Atkinson, in his evidence before a Committee of the House of Commons, stated that four out of ten principal seams referred to by him contain about 180,000,000 workable tons of coal, a quantity sufficient to last 600 years at the present rate of get.

The nature and capabilities of this coal field, have long been known, and in the immediate neighbourhood made available. Hitherto the want of railway communication has kept the production of this field out of the London market. The difficulty of transport is now obviated; a branch of the Great Western Railway, six miles in extent, is about to be carried through this very coal-field, and will pass close to the intended pit's mouth.

This Company will, therefore, be able to afford the means of supplying with the best fuel, and at a cheaper rate than ever yet offered, not only London, with its foundries, gas-works, and steam-mills, but also the towns and villages on the line of the Great Western Railway Company and its vicinity, and the port of Southampton, with its large fleet of ocean steamers, can be reached by rail.

Another large outlet for the sale of this coal will be the Port of Gloucester, where vessels are now obliged to take in ballast at a great expense to enable them to proceed to Newport or Cardiff for cargoes of coal. When this field is in working operation vessels will load with coal at once from Gloucester, at a cost not greatly exceeding the present cost of ballast.

The proprietors of the above coal field are willing to accept paid-up shares of the company in lieu of one-half of the usual amount of Royalty.

Prospectuses and every information may be obtained of the secretary. Application for shares to be addressed to the secretary at the offices of the company, or to any of the following parties—viz.: To the solicitors of the company; Messrs. Lind and Windsor, stockbrokers, 3, Bank Chambers, Lombard-street; Henry Darvell, Esq., solicitor, and Richard, stockbrokers, 2, Bank Chambers, Lombard-street; James Lowe and Sons, stockbrokers, Liverpool.

FORM OF APPLICATION FOR SHARES.

GREAT WESTERN AND FOREST OF DEAN COAL COMPANY.

GENTLEMEN.—I request you to allot me shares in the above Company, and I agree to accept the same, or any less number that may be allotted to me, to pay the sum of £1 per share, and to sign the Deed of Settlement when the same shall be ready for execution.

Name
Address
Business
Reference
Address of referee

Dated this day of To the Provisional Directors of the above-mentioned Company.

GOVERNMENT SCHOOL OF MINES, AND OF SCIENCE APPLIED TO THE ARTS.

Museum of Practical Geology.

The COURSE OF STUDY at this INSTITUTION will commence on THURSDAY, the 6th of November, 1851, and the following LECTURES and PRACTICAL DEMONSTRATIONS will be given during the session:—

1. CHEMISTRY, applied to Arts and Agriculture ... LYON PLAYFAIR, Ph. D., F.R.S.

2. NATURAL HISTORY, applied to Geology and the [] EDWARD FORBES, F.R.S.

3. MECHANICAL SCIENCE, with its applications [] RORY HUNT, Keeper of Mining to Mining ... Records.

4. METALURGY, with its special applications ... JOHN PRICE, M.D., F.R.S.

5. GEOLOGY, and its practical applications ... A. C. RAMSAY, F.R.S.

6. MINING and MINERALOGY ... WASHINGTON W. SMITH, M.A.

The fee for the course of two years is one payment of £30; or £20 for each session, from November to August inclusive.

Practical Instruction in the Field, in Geology, Mining, and Paleontology, is included in the above charges.

Occasional Students may attend separate Courses of Lectures and Field Instruction on payment of the Fees mentioned in the program.

The Laboratories for Chemistry and Metallurgy will be open for the reception of Pupils on payment of £15 for the session of five months.

Officers of the Army and Navy, either in the Queen's or the Honourable East India Company's service, are admitted to the Lectures at half the usual charges.

Students who propose to enter with the view of obtaining the Diploma of the Institution, are requested to apply to Mr. Trembley Reeks, at the Museum, from whom the necessary information may be obtained.

H. T. DE LA BECHE, Director.

TO THE MINING AND SHIPPING INTERESTS.

WIRE AND HEMP ROPES.—MANUFACTURED under PATENT GRANTED TO JAMES B. WILSON, HAYDOCK ROPE-WORKS, NEAR WARRINGTON.

Applicable to SHIPPING, INCLINED PLANES, MINES, COLLIERIES, &c.; also to WIRE CABLES for SUBMARINE, OVERLAND, and UNDERLAND TELEGRAPHs.

Sizes with comparative weights and strength, as also price per cwt. or fathom, may be obtained on application to the patentee.

All sizes of wire strands, railway signal lines, flat and round copper rope, lightning conductors, window sash lines, &c.—Warrington, July 5, 1851.

THE PATENT WATER BALLAST STOWAGE BAGS

and PUMPS having BEEN TESTED, and met the approval of practical men, the Public is respectfully informed that all is now prepared for FITTING UP SHIPS, by application to Mr. KIRK, at the Works, GIBSON'S BUILDINGS, NEWCASTLE-UPON-TYNE, where a pamphlet and illustrations may be obtained by, or forwarded to, parties, and where all inquiries will be fully replied to.—Newcastle-upon-Tyne, Aug. 15, 1851.

BY HER MAJESTY'S ROYAL LETTERS PATENT.

THE PROCESS OF ICE BEING MADE IN ONE MINUTE, without the aid of ice, has elicited from Her Majesty, at the Grand Exhibition, her most gracious approval and unbounded astonishment, by

MASTERS & CO.'S PATENT FREEZING MACHINES, which are now brought to the highest state of perfection; as also are the various MA.

CHINES enumerated below:—

MASTERS'S PATENT FREEZING MACHINE, for making Dessert Ice and Rock Ice from Spring Water, and for Cooling Wine, &c., at a trifling cost.

BUTTER COOLER and FREEZER. ICE PERCOLATING FUNNEL.

ENAMELLED WINE REFRIGERATOR, for Icing Champagne, &c.

MASTERS'S PATENT SHERRY COBBLER FREEZING and COOLING JUG, for producing pure Ice from Spring Water in five minutes, at the cost of 2*d.* in the hottest climate.—Price 3*s.* and upwards.

COOLING DECANTER, or CLARET JUG.—COOLING and FREEZING FILTERER, COOLING CUP, for Surgical purposes, &c. &c. &c.

THE PUBLIC is respectfully INVITED to SEE the PROCESS of MAKING ICE, by the above machines, without the aid of ice—the same process as exhibited by Mr. Masters to Her Majesty, at his Refreshment Rooms, at the Crystal Palace, where 100 quarts of Desert Ice, and large cylinders of Rock Ice are made daily—at Messrs. MASTERS & CO.'S principal DEPOT, 309, REGENT STREET

BRAICH GOCH SLATE AND SLAB QUARRY COMPANY,

MERIONETHSHIRE, NORTH WALES.

Capital £14,000, in 3500 shares, at £4 per share.

TO BE CONDUCTED ON THE COST-BOOK SYSTEM.

MANAGERS.

THOMAS WAKEMAN, Esq., of Chalfont St. Giles, Bucks.

ROBERT JACKMAN, Esq., Half-street, Gloucester.

ARTHUR CAUSTON, Esq., civil engineer, Barton-street, Gloucester.

WILLIAM REES, Esq., architect, Clarence-street, Gloucester.

WILLIAM WINGATE, Esq., builder, Clarence-street, Gloucester.

BANKERS.

LONDON—Messrs. Spooner, Attwood, and Co., No. 27, Gracechurch-street.

GLOUCESTER—National Provincial Bank of England.

INSPECTING ENGINEER—St. Pierre Foley, Esq., civil and mining engineer.

AGENT AT QUARRIES—Mr. Thomas Smith Nicholls.

SECRETARY—Mr. John Fish.

Actual Return of Shares made during the months of May, June, and July respectively, as furnished by the manager:—

	Duchesses.	Countesses.	Small ditto.	Ladies.	Small ditto.	Moss.
	24 x 12.	20 x 10.	18 x 9.	16 x 10.	16 x 8.	
May	4100	3350	1850	400	1450	4600
June	4550	3200	1700	350	2800	4000
July	6700	4250	2150	500	2350	5200
Total	15,350	10,700	5700	1250	6600	13,800

Or gross total of £53,400—amounting to 115 tons.

This independently of slabs, of which there is an immense quantity quarried, and laying round the engine-house. The stock on hand is estimated at from £300 to £400.

Every information given at the offices of the company, Cusion-court, Old Broad-street; at Mr. J. Lane's, mining broker, 53, Threadneedle-street; at Messrs. Brooks and Co., 209, Piccadilly; and at Arthur Causton, Esq., 5, Barton-street, Gloucester; where samples of slate and slabs may be seen, and prospectuses and forms of application for shares obtained until the 30th inst., when the allotment will be made.

London, Cusion-court, Old Broad-street, Aug. 30, 1851. JOHN FISH, Sec.

[The prospectus has appeared in detail in the Mining Journal of previous weeks.]

BRAICH GOCH SLATE AND SLAB QUARRY COMPANY.

NOTICE.—NO APPLICATIONS for SHARES in these QUARRIES will be attended to after SATURDAY (THIS DAY), the 30th inst. JOHN FISH, Secretary.

4, Cusion-court, Old Broad-street, August 30, 1851.

CHYRASE CONSOLS TIN AND COPPER MINE,

situated in the parish of ST. ENODER, near TRURO, CORNWALL.

In 1024 shares, of £5 5s. each.—Deposit £1 7s. 6d. per share.—Conducted solely on the COST-BOOK SYSTEM.

The attention of mining speculators and others are particularly directed to this promising undertaking, which, from the progressive and forward state of the works, holds out every prospect of its soon becoming a good dividend-paying mine; and from its known richness it is well worthy the attention of speculators in mining property.

A few shares only are offered to the public, as more than three parts are already taken up; therefore, immediate application is absolutely necessary, to be made to the Committee of Management, through Mr. Thomas Lewis, No. 17, New Meeting-street, Birmingham; or, A. Yeates, Esq., solicitor, 77, New Hall-street, Birmingham; or to Messrs. Boxall and Co., 7, George-yard, Lombard-street, City, London.

Prospectuses, reports, and every information, may be obtained upon application to either of the above-named parties; the Committee of Management have decided to allot shares to approved applicants until further notice.

The deposits may be paid to the bankers of the Company, the "National Provincial Bank of England," at Birmingham; or through their London and provincial houses.

By order of the committee, THOMAS LEWIS, Purser.

NORTH TRELAWNY MINE (SILVER-LEAD AND COPPER), PARISH OF LINKINHORNE, COUNTY CORNWALL.

In 16,000 parts, or shares, of 10s. each, in scrip to bearer.

This Association is conducted under a Committee of Management, on the principle of the "Cost-book," which exempts proprietors (the undertaking being within the jurisdiction of the Stannary Court) from any liability beyond the amount of their shares, and enables them to withdraw at any time, by giving notice to the purser to that effect.

In addition, scrip (payable to bearer) will be issued for the parts or shares, which will make it optional with the holder to register or not.

This mining sett, from its geological position alone, is one of great value, both for silver-lead and for copper, which is confirmed by the discoveries already made, and give assurance of the best results.

North Trelawny is at Rilla Mill, in the parish of Linkinhorne, and manor of Rillaton; it is bounded, generally, on the north and east by the Callington district; on the west by the well-known Caradon; and on the south by the celebrated Trelawny district.

The Trelawny lode of silver-lead runs through this sett north and south, and the Caradon copper lodes likewise traverse the property east and west. It is superfluous to allude to the well-known extraordinary richness of either the Caradon or the Trelawny mines. The stratum generally is dark blue soft "plumb" killas, which is so congenial for the production of rich mineral, and can be worked with much facility and economy.

Prospectuses, with form of application for shares, and every information, may be obtained at the offices, No. 30, Bucklersbury.—By order, JAMES A. MAY, Purser.

ST. AGNES BEACON TIN AND COPPER MINE, CORNWALL.—In 2500 shares, of £1 1s. each.

(ON THE COST-BOOK SYSTEM—No further Liability).

In conformity to the Law of the Stannaries.—Committee to be selected from the shareholders.

BANKERS—London and Westminster Bank.

The share list being nearly complete, early applications for the remainder part may be made to F. W. Pike, Esq., 26, Bedford-row; or Mr. John Morgan, sworn broker, No. 2, Cusion-court, London, where plans and reports may be inspected.

Dated August 15, 1851.

SHARP TOR COPPER MINING ASSOCIATION.—In 6144 shares of £2 each.—On the Cost-book System.

COMMITTEE OF MANAGEMENT.

Mr. Alderman COPELAND, M.P., 160, New Bond-street.

JOSEPH THOMPSON, Esq., Gloucester-terrace, Hyde-park (director of the Commercial Bank, London).

JOSEPH TURNLEY, Esq., 19, Bedford-place, Russell-square.

JOHN VINK, Esq., 4, Crescent, Minoris.

(With power to add to their number.)

BANKERS—The London Joint Stock Bank.

SECRETARY—J. A. Joseph, Esq.

OFFICES—No. 3, SIZE-LANE, BUCKLERSBURY, LONDON.

This MINE is situated in the parish of LINKINHORNE, in the county of CORNWALL. It occurs at the junction of the granite and killas, a stratification that has produced immense deposits of ore, and one in which are to be found by far the greater number of the dividend-paying mines in Cornwall.

The sett extends 300 fms. on the course of the lodes, and is held at 1-15th dues. It is bounded by the famed Caradon district, the mines of which are paying immense profits, and immediately adjoins the Phoenix Mine, being traversed by the cross-courses which made the ore there. The Phoenix Mine is also paying very large profits, and the shares are £240 each (the 300th).

In 1849, upon the recommendation of the manager of the Devon Great Consols, a lease was applied for and obtained by a small party of adventurers, who erected counting, manager's, and storehouses, smelt's shop, &c., opened on a lode of immense size from 20 to 30 feet wide, sunk a permanent shaft, and erected a 16-inch cylinder steam-engine, with engine-house, drawing and plunger lifts, and pitwork complete. This shaft is now 38 fathoms in depth, the lode in the bottom still maintaining its original size and highly-promising appearance.

This company, having abstained from placing it before the public, until by a sufficient trial, and the erection of an adequate plant, they had assured themselves that it was worthy of vigorous prosecution, is now formed for the purpose of securing the co-operation of parties who may wish to join the adventure; 3072 of the shares will forthwith be allotted on application, to persons of undoubted responsibility only, at £2 per share; £3000 will be appropriated for future working capital, which is deemed amply sufficient to place the mine in a dividend-paying state, and the remainder to repay the outlay hitherto expended. The principle of the cost-book will be strictly maintained, no debt will be allowed to accrue, consequently there will be no liability.

The reports of eminent mining agents, prospectuses free of postage, and any further information can be obtained at the office of the company, where the Cost-book regulations can also be seen.

Applications for shares to be made to the secretary, or to Messrs. J. Hutchinson and Son, stock and share brokers, Lutonbury; Messrs. Highfield & Withers, Liverpool; Messrs. Johnson, Bradley, and Walker, Manchester; Messrs. Flint, Hull, Messrs. Lane and Perry, Birmingham; and Messrs. Dickenson, Newcastle-on-Tyne.

Subjoined are the reports of eminent mining agents:—

Extract from Capt. J. Richards's (principal agent of the Devon Great Consols) report:—

"The lode is of most promising character, containing capel, spar, prian, and mundic, with here and there spots of good quality ore. The back of the lode, which has been opened upon by certain pits at the surface for a considerable distance, is of immense size, carrying on the south wall a very fine gossan, 10 feet wide; the north portion is harder, being a mixture of very fine capel and gossan. The cross-courses traversing the sett are the same which pass through Wheal Phoenix. The sinking of the shaft should be continued with as much force as can be brought to bear on it; and looking at the fact that the nature of the lode, as well as the country adjoining, is precisely similar to that of the Phoenix Mine (which I also inspected for the purpose of informing myself as to the character of this district), I have every reason to believe an increased depth in this concern will become equally productive with its valuable neighbour."

Extracts from the original reports of Mr. J. H. Hitchins, consulting engineer to the Devon Great Consols Mine:—

"I am quite as sure about it as I was in my representations and promises as regarding the turning up of Wheal Maria—in fact, I am going on the same ground of analogy. In both instances there are the same circumstances and conditions geologically observable—strictly so. The strongest inducement probably that I can well afford would be to say, that the splendid gossan I have my eyes on is showing, in same way as in the case of Wheal Maria, at surface, of many tons weight. Upon the best corroborative evidence also, regarding relative position and ran, added to rigid similarity of gossan, iron, quartz, &c., it is to be safely taken as being one and the same lode. There is also the essential fact of sufficient approximateness, as between granite and schistose formations. There will be required for it comparatively but little of capital and time, important desiderata in mining you will undoubtedly admit. I am quite sure that it is our Maria lode—there is no other in the country with such an extraordinary up-heap of magnificent gossan; besides, its linear course through the country both on aerial view and referred to the best geological map that we have—will prove it."

"I am now writing here at Wheal Maria, surrounded by our agents, who have been looking at the stuff here ad to, and they are completely surprised at its magnificent character. I have had some of it tested, and it has been found to contain, in minute proportion, tin ore, which is the case in most of the great mining concerns in the country. The lode opposite the shaft is full 30 feet wide altogether, and the splendid gossan part 20 feet, which in depth will be the ore part, as practically realised, not only in the Devon Great Consols, but also in similar great deposits. There are rocks of most magnificent gossan at the surface, from the parts opened, full 4, 5, 6, 7, and 8 cwt. each."

CASTLE DINAS TIN MINE.

In 2048 shares—£2 per share.

On the "Cost-book" Principle, and subject to the Stannary Laws of Cornwall.

CAPTAIN OF THE MINE—Mr. John Skewis.

CONSULTING CAPTAIN—Mr. Samuel Vivian, Wheal Zion.

PURSER—Mr. J. D. Brunton.

SECRETARY—Mr. R. P. Lemon.

COMMITTEE OF MANAGEMENT.—To be selected from the shareholders.

BANKERS—West of England Banking Company, and Messrs. Glyn and Co.

SITUATION OF MINE—Parish of St. Columb, 9 miles from Padstow, and 12 from Truro.

Extent of sett 2400 acres, and term 31 years.

LOADS DUES—One-fifteenth; to be reduced to one-eighth when steam-power is employed on the mine.

This remarkable sett extends 24 miles in length and 13 miles in width, comprising about 2400 acres of mineral ground. It is held partly under the Crown, and partly under the Earl of Falmouth. The mine is not subject to any fixed rent. The sett is sufficiently large to be divided into four sets of more than ordinary size; but it will be polite for the adventurers to retain the whole, until they have ascertained the extent to which their own workings can be most advantageously carried.

Sixteen of the lodes have been discovered at Castle Dinas, varying in width from 20 in. to 5 feet. The tinstone is unusually rich, containing from 5 to 25 per cent. of black tin, and some samples have yielded even 80 per cent. Being quite free from mundic, the ore does not require burning, and will fetch at the present time £50 per ton, which is the highest price in the market. The cost of raising and dressing the ore will be greatly below the average.

A deep adit has been driven, three-quarters of a mile in length, which has cut twelve lodes of tin. This adit drains the mine to the depth of 25 fathoms, and will enable the adventurers to realize almost immediate profits.

There is a stream of water on the mine, adequate to drive a 20-foot water-wheel, working eight heads of stamps.

A further outlay of less than £200 will make Castle Dinas a productive dividend-paying mine. Three months will be sufficient for this purpose. All future expenditure may be provided for by sales of tin.

Tin has been obtained from time immemorial on the surface of Castle Dinas, by the old mode of streaming; but the mine has never before been worked as a tin mine. The deep adit was driven in search of copper; and the former adventurers were not acquainted with the riches contained in the numerous tin lodes which they heedlessly intersected.

The mine is divided into 2048 shares. The price charged by the owners and present adventurers is £2284, in part payment of which they retain 1256 shares, at 30s. per share, amounting to £1884. The remaining 792 shares will be issued at 30s. per share, which will produce £1188; out of which will be paid £400, balance of purchase-money, leaving £788 available for working the mine. The remaining 10s. per share, on the 2048 shares, will, if required, be raised by calls; no future call exceeding 2s. 6d. per share.

Samples of tinstone and black tin from Castle Dinas Mine may be inspected at the office of the secretary, North Parade, Bath.

CAPTAIN SAMUEL VIVIAN'S REPORT.

Wheal Zion, Aug. 11.—I was at Castle Dinas Mine, near St. Columb, on Thursday, the 7th inst., and made a survey of a great portion of that matchless sett (for extent); and was well pleased to find one half, or nearly so, of the land composed of soft granite; the other portion of Juncky killas. Some of the lodes, producing fine samples of tin ore, are to be seen near the junction of the strata—others in the entire killas stratum, and some in the entire granite. This is a piece of land that I had for near 40 years felt disposed to explore, but circumstances have until now prevented my doing so. If the plan proposed, of fixing a 20-foot wheel to stamp the tin on the spot, and draining the lodes in the centre of the sett, by virtue of the wheel lobby, be carried into effect, and the adit level, from the north side of the sett, be cleared and completed, tin in great abundance will be taken to market; and the whole may be done for a comparatively small capital. Looking at the concern in all its bearings—viz.: the extent of the sett (being the size of three ordinary ones), its excellent situation for strata—it being intersected by at least 15 tin lodes (from some of which large quantities of tin can be raised as soon as the adit levels are cleared), together with the great facilities afforded by the form of working of the land for the development of other lodes—kindly where seen, but not sufficiently opened upon—I think the sett one of no ordinary character, and that those who obtain an interest therein will after a little time consider themselves fortunate by embarking in an undertaking possessing such advantages.

The applications for shares already received, exceeding the number to be allotted, no further applications can be entertained.

GREAT WHEAL DIAMOND COPPER MINING COMPANY, STOKE CLIMSLAND, CORNWALL.

In 10,000 shares, of £1 each.—Deposit 10s. per share, 63.

Which it is expected will prove ample sufficient for the working of the mine.—No further call can be made without the sanction of the shareholders.

CONDUCTED ON THE COST-BOOK PRINCIPLE.

Under the jurisdiction and protection of the Stannaries of Cornwall, which, among other privileges, exempts the adventurers from the operations of the Joint-Stock Companies' Act—limits all individual responsibility, and allows a shareholder to withdraw from the undertaking at a day's notice, and claim the value of his proportion of the assets of the Company.

COMMITTEE OF MANAGEMENT.

JAMES DIAMOND, Esq., 15, Cavendish-sq., London, and Newton, Tavistock

JOSEPH WALLS, Esq., 19, Ovington-terrace, Brompton

EDMUND DOWNING, Esq., Warfield House, Hampton

THOMAS SMITH, Esq., Stanhope-place, Hyde-park

SECRETARY—Mr. William H. Smith

BANKERS—The Royal British Bank, Tokenhouse-yard, London; Devon and Cornwall Banking Company, Tavistock.

THE MINING SHARE LIST.

Shares.	Mines.	Paid.	Dividends per Share Declared.	Last Paid.	Last Price.	Present Price.
5120	Alfred Consols (copper), Phillack	3	£ 1 3 to 1st Aug.	£ 0 6 0 Aug.	134 14	14 13 1
1245	Alt-y-Crib (silver-lead), Talyllyn, Wales	5	0 2 6 to August	0 2 6 "	74 8	—
1624	Baileswidden (tin), St. Just	112	8 15 to Aug.	0 4 to Aug.	74 8	—
4000	Bedford United (copper), Tavistock Devon	28	2 15 to Aug.	0 4 to Aug.	74 7	71 7
64	Boscawen Downs (tin), St. Just	750	0 to May, 1849	100	200	200
100	Botallack (tin and copper), St. Just	182	40 0 to 5th April	5 0 to May	200	200
1000	Bryntul, Llanidloes, Montgomeryshire	21	0 5 to end June	0 5 to June	16 17	—
1000	Callington (lead and copper), Callington, Devon	29	6 0 to Sept., 1847	6 4 6	5 6	—
1000	Carn Brea (copper and tin), Illogan	18	202 0 to June, 1851	2 0 to June	105	—
1024	Chlybras, St. Endor (tin and copper), Cornwall	31	2 6 8	—	36 40	42 35
128	Comford (copper), Gwennap, Cornwall	65	—	6 1	—	—
236	Condurrow (copper and tin), Camborne, Cornwall	20	11 0	—	100	105 100
1024	Devon Great Consols (copper), Tavistock	1	239 10 to Aug.	7 0 to Aug.	296 300	296
180	Dolcoath (copper and tin), Camborne	252	855 14 to 1847	—	28	—
128	East Pool (tin and copper), Pool, Illogan, Cornwall	241	233 0 to 1843	—	140	140
94	East Wheal Crofty (copper), Illogan, Cornwall	125	242 1	—	120	150
128	East Wheal Ross (silver-lead), Newlyn	50	2215 0 to 25th July	15 0 to July	450 500	39
494	Fowey Consols (copper), Tywardreath	40	—	—	—	—
3750	General Mining Company for Ireland (copper)	1	35 per cent. to June	10 per cent. to year	5 1	—
100	Goginan (lead), Cardiganshire, Wales	5	440 0	—	200	—
96	Great Consols (copper), Gwennap, Cornwall	1000	333 6 8 to January	—	—	—
119	Great Work (tin), Germoe	100	110 0 to June	7 10 to June	2 0	—
1024	Herodsfoot (lead), near Liskeard, Cornwall	8	0 7 6 to Aug.	6 1	6 1	6 1
1000	Holmbois (lead and copper), Callington	24	25 0 to Feb., 1844	Feb., 1844	123	11 12
1000	Lewis (tin and copper), St. Erth	17	2 0 to 1st Aug.	0 10 to Aug.	20	—
160	Levant (copper and tin), St. Just	24	1030 0 to 5th June	5 0 to June	150 155	—
100	Lisburne (lead), Cardiganshire, Wales	75	640 0 to 1st Aug.	20 0 to Aug. 1	700	—
5000	Low's Patent Copper Smelting Company	5	1 0 6 to July	0 4 6 to July 1	10	—
2000	Mining Company of Ireland (copper, lead, and coal)	7	7 10 6 to Feb., 1847	7 10 to Sept.	205	200
200	North Pool (copper and tin), Pool	223	217 10 to 1st Sept.	7 0 to Aug.	160	180
140	North Roskear (copper), Camborne	10	220 0 to ditto	—	—	—
6000	North Wheal Bassett (copper and tin)	—	1 1 to 5th April	—	11 14	—
124	Par Consols (copper), St. Blazey	552	374 0	—	650	—
1160	Perran St. George (copper and tin)	211	1 15 to June	0 10 to 4th June	40	—
500	Providore Mines (tin), Uny Lelant	208	18 4 6 to Aug.	0 15 to Aug.	25	—
256	South Caradon (copper), St. Cleo	24	255 0 to July	2 10 to July	122	122
256	South Treligus (copper), Redruth, Cornwall	16	27 0 to 5th Aug.	3 0 to Aug.	150	—
348	South Wheal Frances (copper), Illogan	80	95 15 to 10th July	6 0 to July	230	—
94	Spearns Consols (tin), St. Just, Cornwall	13	3 7 6 to June	0 12 6 to June	81 9	8 9
1000	Stray Park and Camborne Vean (copper), Cornwall	15	859 0 to Aug.	4 0 to Aug.	80	—
95	Stray Park and Camborne Vean (copper), Cornwall	80	11 10	—	13	14 13 1
1000	Tamar Consols (silver-lead), Beverton	4	2 11 to July, 1849	1 0 to Aug.	61 7	62 7
6000	Tincraft (copper and tin), near Pool	7	5 17 6 to Sept.	2 10 to June	107	100 105
256	Trehane (silver-lead), Menheniot	13	26 15 to August	0 5 Oct. 1847	15 15	15
5000	Treleigh Consols (copper), Redruth	6	1 3 to Oct., 1847	0 5 Oct. 1847	24 24	24 24
96	Treasurer (copper), Gwennap, Cornwall	20	4580 15 to 1848	—	230	—
120	Trethellan (copper), Gwennap, Cornwall	6	402 10 to 5th April	—	13	—
120	Trevisekey and Barrister (copper)	130	239 15 to August	9 10 to Aug.	200	205
1024	Wellington (copper and tin), Perranporth	64	2 2 6	0 5 to March	7	6
356	West Caradon (copper), Liskeard, Cornwall	20	160 5 to June	2 10 to June	107	100 105
512	West Providence (tin), St. Erth	10	—	—	95	93 95
256	Wheat Bassett (copper), Illogan	104	245 0 to 3d Aug.	10 0 to 3d Aug.	392	380
256	Wheat Brewer (copper), Redruth	2	96 10 to 1st Aug.	12 10 to Aug.	530	530 530
256	Wheat Buller (copper), Redruth	5	2331 10 to Aug.	6 0 to Aug.	120	—
126	Wheat Friendship (copper) Devon	120	1 0 to July	0 5 to July	8	—
5000	Wheat Goldens Consols (silver-lead), Perranporth	3	4 0 to 5th April	2 0 to June	20	—
430	Wheat Lovel (lead and tin), Helston	10	187 0 to Aug.	5 0 to Aug.	135	—
112	Wheat Margaret (tin), Uny Lelant	79	21 5 to 21st Aug.	3 0 to Aug.	60	60 61
512	Wheat Mary Ann (lead), Menheniot	54	—	—	235	280
40	Wheat Owles, St. Just, Cornwall	200	—	—	2 10 to May	75
240	Wheat Reeth (tin), Uny Lelant	204	22 10 to February	4 0 to Aug.	180	210
198	Wheat Seton (tin and copper), Camborne, Cornwall	107	194 10 to 5th Aug.	2 0 to May	50	50
520	Wheat Trelawny (silver-lead), Liskeard, Cornwall	34	26 10	—	18 26	26
1024	Wheat Tremayne (tin and copper), Gwinnar, Cornwall	94	6 0 to Aug.	0 10 to Aug.	18 26	26
5000	Wicklow (copper), Wicklow	5	313 per cent. ..	18 p. c. end Aug.	258	—

FOREIGN MINES.

Shares.	Shares.	Paid.	Last Price.	Present Price.
100	Alton Mining Company (copper), Norway	144	3 0 to Mar., 1848	2 23
10000	Brazilian Export (gold), Brazil	244	17 6 to Dec., 1844	2 2 3
12000	Cobre Copper Company (copper), Cuba	40	45 12 0 to June 1851	33 34
10000	Copio Mining Company (copper), Chile	14	3 3 0 to Oct., 1850	33 34
20000	General Mining Association (iron & coal), Nova Scotia	20	6 10 0 to June, 1851	10 10 12
2700	Marmato (gold), Colombia	21	2 0 0 to June, 1851	17 17 20
5051	Mexican Company (silver), Mexico	501	0 8 6 end of 1846	44 45 46
7000	Royal Santiago (copper), Cuba	10	33 4 0 to July, 1846	31 32 33
11000	St. John del Rey (gold), Brazil	15	12 17 6 to Dec., 1850	17 18 19 20
43174	United Mexican (silver), Mexico	284	1 12 6 to Feb., 1850	75 76 77 78

Shares.	Paid.	Last Price.	Present Price.	Shares.	Paid.	Last Price.	Present Price.
1094	Appledore (silver-lead and cop.), St. Ives	24	2 24	2560	Garras (silver-lead), near Truro	5 1	22
949	Balnou Consols (tin), Uny Lelant	—	3	5000	Garreg (lead), Ffalt	14	14
5000	Bargally (lead), Cairnsmore	—	1	1000	Gelli-rei-vin (silver-lead), Cardiganshire	1	5
3650	Bawden (silver-lead), St. Tathan	6	2 24	2500	Georgia Consols (tin), St. Ives	24	7
508	Bell and Lanarth (copper), Gwennap	24	3	256	Genoman (copper), St. Cleo	46	12
256	Berriow (copper), Liskeard	24	10	243	Greamber and St. Anbyn (copper)	84	34
1500	Bishopstone (silver-lead), Glamorganshire	24	100	6500	Great Bryn Consols (copper and tin)	1	1
32	Black Burn, Alston, Cumberland	20	—	10000	Great Cowarch (silver-lead), Merloneath	2	3
5000	Black Crag (lead), Kirkcudbrightshire	5	5	1000	Great Polgoon (tin), St. Austell	3	3
1024	Bedmin Consols (lead), Wadebridge	6	44 44	1024	Great Sheba Consols (tin and copper)	7	6
5000	Bedmin Moor Consols (tin and copper)	1	44	1024	Great Wheal Alfred, St. Erth and Philack	4	4
1024	Bedmin Wheal Mary (copper), Bedmin	8	8	1024	Great Wheal Badlern, (lead and silver-lead)	2	5
6000	Bolene	24	4	5000	Great Wheal Martha (cop.), Stoke Clims.	—	1
240	Borlouli and Nanpean (tin), St. Just	20	20	512	Great Wheal Rough (lead), Trelawny (cop.)	29	20
1024	Bordington Park (silver-lead), Plympton	1	4	6000	Great Gwalo (cop.), Camelford	5	5
240	Boscan (tin), St. Just	15	10	1024	Gustavus Mines (cop.), Camborne	6	5